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THE ADDRESS IN MEDICINE.

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BY ROBERTS BARTHOLOW, M.D., LL.D.,

PROFESSOR OF MATERIA MEDICA, GENERAL THERAPEUTICS AND HYGIENE, IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA, ETC.

Mr. President and Gentlemen: The last International Medical Congress, in some respects, was the most important of the series. In the discussion of those great topics included within the domain of State or preventive medicine, matters of high interest for all educated people, of the greatest importance to the well-being of society, and that exhibit in the clearest manner the disinterested benevolence of the medical profession, were fully considered. To an unprejudiced observer it would seem that matters of such high interest would receive respectful attention, and such practical benevolence be greatfully appreciated by the great organs of public opinion—the daily newspapers: it must be admitted that it did not prove to be so.

It is a remarkable fact that the proceedings of the Congress were revealed to the universal public in a manner that is not too strongly characterized by the word *flippant.* In explanation of this phenomenon it was said that such is the usual attitude of the press toward the medical profession; that these representatives of current opinion do not take the profession "seriously," but rather view the men, and the work of the Congress, as a comedy performance, to be criticised and laughed over on the same lines. If the great metropolitan dailies stood alone in this attitude, it were the less surprising; but, unfortunately, others participate. No thoughtful observer can have failed to see that such is the disposition of the press throughout the country toward all medical organizations. The same position is assumed by a certain element in American society that delights to be considered "*cultured.*" By these, a physician is a "medico," and the art and science as a profession or business, is no higher esteemed than such shows as Barnum's wooly-horse, or Chang the Chinese giant. Recently at a meeting of a medical jurisprudence society, several members, scientific men, questioned the accuracy of some statements made by the author of a paper who is connected officially with the Coroner's office. For thus presuming to question an official, they were sharply criticised by the prosecuting attorney, who happened to be present, and he also chided them in a manner befitting a pedagogue to his naughty boys, rather than members of a scientific body.

The causes of this state of things are not far to seek. Every one here present must be familiar with them. I purpose only to consider those which have to do with the therapeutic art—the most important.

Not a little of the ignorance, the crudities, the vague theories of the eighteenth century still linger in the nineteenth century near its close. It is yet understood by many that the therapeutic art is based on some *ism* or dogma. "Allopath" and "homœopath" are still bandied about as having vital power, when they were long since relegated to the lumber-room of the past by modern science. We yet hear of "new school" and "old school," as if notions brought out near the close of the last century, compounded of the vagaries of Hahnemann and the mysticism of Mesmer, could still continue guides to practice. The contentions of so-called "schools," the noisy demonstrations of the Thompsonians, and electrics, and physio-medicals; the rapid water-cure, and the innumerable special cures, have produced in the popular mind a distrust of all systems.

The cry of "new school" has proved the most sympathetic; but the attractive sugar pellets, and tasteless liquids, carry with them their own destruction, for, in the deeper consciousness of men, lies the fatal objection that great results are not to be accomplished by such slender means. Hence, left to its own course, homœopathy has practically died out on the Continent. On this side of the Ocean it still maintains a certain influence, because of social conditions and prejudices that are only possible in free communities.

The success of such wretched puerilities, such inanities as the homœpathic practice consists of, does more to lower the position of the medical profession than any other cause. The false statistics published as actual fact, accepted as true, and passing unchallenged, are at this moment doing an almost incredible amount of mischief. Two years ago a pamphlet was very widely distributed throughout the West, as a trade document, containing much falsehood in the way of statements of pretended scientific truths, and fictitious statistics, that placed legitimate medicine in a false position, and discredited its practice to a most serious extent. This pamphlet was issued by a St. Louis homœopathic pharmacy, and was written by a Dr. Somers, who

had been a professor in the faculty of Iowa University, and it had, therefore, an air of authority that materially contributed to its success. The usual tirade against allopathy—its past errors, and its present uncertainties—occupied much of this pamphlet, but its really effective part consisted in statistics made up out of the whole cloth. These statistics, it is asserted, were obtained from official publications, and gave the results in numbers of the comparative success of homœopathy and allopathy, in the cities of Boston, New York, Philadelphia, and others. It was thus shown by pretended official figures, that homœopathic practice is invariably from 30 to 50 per cent. more successful than allopathic.

What answer can be made to such statements, apparently supported by official figures? I am informed by a physician of the best reputation, living in a large city of the West, that this pamphlet was sent to every house-holder in a considerable town, that legitimate practice was in a short time completely destroyed, and every regular physician reduced to extremity. We need not be surprised. How could any physician answer those immutable figures? Those who suffer from the effects of such misrepresentations are clear that an adequate answer should be made, although the profession is averse to medical polemics—for, wherever this lying paper has gone, the regular practitioner is silenced. Here are the official figures—what will you do about it? It remains unanswered, and is yet doing its work efficiently as a trade circular.

When this pamphlet was brought to my notice, I communicated with the official authorities to learn about the source and probable value of these pretended official figures. I expected to discover manipulations which made the figures tell the story that suited the purposes of the St. Louis drug house; but I was amazed to hear that no statistics of this kind exist at all, that a return showing the effect of a system of practice on the mortality rates had never been made, and therefore never published, and hence the figures given in the pamphlet were made out and out. I ascertained on further inquiry that though every aid were given, it would be a matter of infinite difficulty to get such figures, and to assure their accuracy would require an amount of time and trouble that hardly any one could give to such a task.

We cannot but regret that such misrepresentations should go unexposed. No other argument were needed to demonstrate the falseness of a system, maintained by frauds of such a shameless character; but meanwhile the advocates of the system profit by the forbearance of the medical profession in the attitude of maintaining its dignity.

The one remedy for existing ills—and to put the medical profession in its proper attitude as a scientific body—is to improve the art. How can the application of remedial agents be rendered more certain?

As a teacher of therapeutics for many years, I could not fail to observe that the attainments of the profession in respect to the powers of medicines are not as fully developed as they ought to be. They do not have that familiarity with the physiological powers of drugs which the effective use of remedies demands. It thus happens that the highest precision is not attained. Vague notions take the place of scientific accuracy when such has been the progress in this department, that a considerable degree of certainty should be the rule.

It must be admitted that the acquisition of therapeutical skill has been greatly hampered by the complexity of the materials. The barnacles of a century have been accumulating on the framework, and the new knowledge has been thrust into the crevices of old notions until all is made to appear confused and uncertain.

The subject should be divested of its superfluities. The list of preparations given in the *U. S. Pharmacopœia*—our only official authority—can be greatly curtailed with advantage. Remedies long in use and of comparatively little value are overloaded with formulæ. The preparations of iron given by the *Pharmacopœia* are thirty-eight in number, of mercury twenty-five, of rhubarb fifteen, of aloes as many. One-third of these could perform the duty of all. The botanical and pharmaceutical details are such that to master them would require the whole of the time given to the medical studies. If obtained, such knowledge is of small value to physicians; therefore it should be turned over to the pharmacist, to whom it properly belongs.

It needs no argument to show that to accomplish the best results, not only the remedy in its crude form, but its constituents must be accurately known. Whenever an active principle is not available, the most concentrated preparations should be prescribed. In an especial degree is it necessary to have complete information regarding the dosage and actions of alkaloids. Let me emphasize in the most positive manner the importance of using the alkaloids and active principles, for by them we have minuteness of dose, singleness of action, and precision of effect.

In these "flabby days," as Mr. Froude entitles the present time, we must pay deference to taste, and secure the administration of a remedy which in a crude form may be rejected.

Under the name "*dosimétrique*" a system of therapeutics has been brought forward within a few years past, in which the point of departure is the exclusive use of the alkaloids and active principles made into granules. I will not enter into the theoretical notions on which Burggraeve bases his system. Dr. von Penterghem has done me the honor to send me his volume, which contains the dosimetric system fully elaborated, but I do not find that there is any truth which can be considered new, except the form of the medicament. Furthermore, their work is superficial. Dosimetric practitioners are imperfectly acquainted with the physiological action of remedies—their point of departure. This so-called system is, therefore, little more than a name which it was hoped, there is reason to believe, might play the rôle once the fortune of homœpathy.

That to attain to any degree of accuracy the administration of active principles is necessary, is obvious enough. Crude drugs have a varying constitution due to climate, character of season, mode of

manipulation, and other accidents. A notable illustration of this truth is afforded us in the composition of Pilocarpus. It contains two active principles: one *Pilocarpine* constant in form and powers; another *Jaborine* variable. The proportion of jaborine found in different lots of the drug pilocarpus varies one from another, and the process of separating the alkaloid also affects the quantity. Now as jaborine is an analogue of atropine, and therefore opposed in the entirety of its actions to pilocarpine, it is clear that the crude drug must be uncertain in its effects and one specimen vary from another in the most radical manner. In this way only can be explained the conflicts of observation first noted; for the alkaloid pilocarpine acts in a uniform manner, and must continue to do so. To obtain the desired results it is clear that the alkaloid and not the crude drug must be used.

There are many illustrations of the same truth: for example, in the actions of cinchona and quinine, opium and morphine, nux vomica and strychnine, etc.

There can be but one basis for the administration of remedies. That must be a true, exact, and intimate knowledge of the manner in which they act on the tissues and organs of the body. This knowledge, as it now stands only in part developed, is large, somewhat complicated, but quite available, and will richly compensate all who will master its spirit and form.

It is within a comparatively short period that the study of the physiological action of remedies has been the basis of scientific therapeutics. The opening of the present century marked the very beginning of this movement, which, even now, is far from maturity. We owe to the genius of Magendie, seconded by the labors of Bichat, the fundamental principles, and to Bernard their practical execution. It is a curious fact, that when the foundations of physiological therapeutics were being laid, Hahnemann was developing his notion of the spiritual essence in medicines under the tuition of Mesmer, who, at that time, was firing the heart of female Paris with his magnetic force. To-day, under the title of "New School Medicine," we have this eighteenth century mysticism unchanged and unchanging, whilst legitimate medicine has been continuously developing, under the inspiration of all forms of physical science. To admit that homœopathy had any influence in the shaping of scientific medicine, is to admit its right to a hearing. It had nothing to do with the new forms scientific knowledge was taking, especially not with biology. Physiological therapeutics being the form the art of cure must, of necessity, assume, is there any law or rule which may serve as a guide to practical use? Of this there can be no doubt. The law of antagonism of action is such a guide within its proper range. By this is meant such a balancing of effects that the morbid action ceases. A capital illustration of the action, and of its consequences, is afforded us in the use of amyl nitrite in the relief of that form of angina pectoris with high tension of the vessels, and of fibroid kidney by the use of nitroglycerine. Here tissue changes are held in check, and ultimately removed, by remedies that oppose the morbid action, or that maintain a balance of effects until the lesions no longer exist.

Besides the antagonism that is direct, there is an antagonism that is similar. That a remedy which has a selective action on any tissue will have a curative action in the diseases of that tissue, is a proposition that is generally true. If the therapeutic action is similar to the morbid, the curative effect is in inverse proportion to the closeness of the correspondence.

If there be similarity of action merely, the curative effect is trivial or is entirely wanting. To illustrate: Pilocarpus is the most powerful sudorific we possess; but it is the least effective agent in the arrest of sweating. On the other hand, atropine is the most effective, and this, as all the world knows, dries the skin by stopping the action of the sudoriparous glands. If we place together the physiological agents now used to arrest sweating, we find that they are powerful in proportion to the degree in which they lessen the functional activity of the sweat-glands. Thus we have atropine, picrotoxin, strychnine and pilocarpine. Such a fact is conclusive against the theory and practice of homœopathy.

Next to the action of physiological antagonism as a means of securing accuracy in our therapeutical methods, must be placed the use of the physical forces. The important one, and that only to which I can allude, is electricity.

Infinite harm has been done to this subject by specialism. It is not yet divorced from charlatanry of the worst sort—the pseudo-scientific. The most serious embarrassment in assigning electricity to its rightful place in our materia medica, is the complexity of the subject. Unfortunately, no man can use the agent rightly who is unacquainted with its physics and physiology. Within the sphere of its curative action, it is simply unrivalled. That this strong statement is not universally accepted is due to the fact that this force is not sufficiently studied, and not appreciated because its powers are not utilized. Professional skepticism, added to the ill-repute which comes of inveterate quackery, acts in turn on the minds of patients, and thus prejudice is engendered that constantly interferes with the proper development of the science.

Notwithstanding the skepticism, or the positive unbelief, there are two facts that cannot be explained away or denied, for they rest on the immutable basis of physical truth.

The first fact is the power of galvanism to affect the circulation.

The second fact is electrolysis, or electrolytic decomposition.

Late researches have shown that a moderate galvanic current increases the vermicular action of the vessels and thus increases the blood supply to a part, and the activity of the function of nutrition. On the other hand, strong currents tetanize the vessels and thus lessen the amount of blood passing to a part, diminishing congestion. The same laws hold good of the faradic current if the parts to be acted on are so situated that the electrodes come in contact with the tissues.

As respects electrolysis, skepticism has no ground of opposition. The same laws that regulate polar action in electrolytic decomposition must be equally

applicable within the body as without, the same substances being acted on. The action of the electrical current on the vessels, the electrolytic decomposition of materials that can be thus acted on, have brought about results not hitherto attainable. Merely as indicating results now of daily procuring, and which, no doubt, receive full consideration in the Sections, I mention only the remarkable effects had in the treatment of pelvic congestion, inflammation and its products, of stricture of the urethra, and similar lesions. Again, in affections of the trophic system, cutaneous diseases, etc., quite a different aspect has been given them by electrical treatment. Nor should I fail to mention the quite remarkable results which have been lately achieved by the combined currents —galvano faradic.

Will my brethren who practice the obstetric art permit me to ask why post-partum hæmorrhage shall not be promptly arrested by the faradic current, instead of by ergot, friction of the abdominal walls, and other reflex stimuli intended to secure uterine contractions?

There is a vast field needing cultivation in the application of hygiene to therapeutics. The comparatively new method of the dietetic treatment of disease offers us remedial agencies which certainly approximate to exactness in method and surety in result. Time and the occasion permit me only to offer the merest hints for your serious and wise consideration.

ORIGINAL ARTICLES.

ABORTIVE TREATMENT OF TYPHOID FEVER.

Read in the Section on Practical Medicine at the Thirty-ninth Annual Meeting of the American Medical Association, May 10, 1888.

BY L. D. WOODBRIDGE, M.D.,
OF WILLIAMSTOWN, MASS.

Much has been written in reference to the abortive treatment of typhoid fever. Most of the literature of the subject has concerned itself chiefly with the advocacy of different drugs, and the statement of clinical results obtained by them. The profession will not test these methods extensively until they are shown to rest on a rational foundation of facts of anatomy, physiology and pathology. My purpose is to make a beginning, at least, in this direction; to state the facts that should give both encouragement and direction to our efforts. While I shall not omit a statement of my method, I count it of secondary importance. The facts that have guided me to it are guiding me still, and have, I believe, still better things in store.

The difficulty of proving beyond question the success of an abortive plan of treatment of a given disease is greatly increased by the following facts: that in order to merit the name, the treatment ought to arrest the disease at an early period in its ordinary clinical history; that the symptoms pathognomonic of most diseases occur late in their course; that therefore a successful abortive treatment will arrest most diseases before the development of symptoms that allow of a positive diagnosis, and while there is yet room for a possible doubt as to the identity of the disease whose short course we attribute to an abortive plan of treatment.

The demonstration of the success of an abortive treatment of typhoid fever presents these difficulties in an extraordinary degree, because the symptoms recognized in the past as absolutely pathognomonic all occur late in its history.

The difficulty can be overcome and an absolute demonstration reached only by the following methods:

1. Correspondence of results reached in a very large number of cases that present strong reasons in their symptoms or lineage, or both, for believing them to have been typhoid fever.

2. Post-mortem appearances obtained in the event of death from some other cause, during convalescence from what we believe to have been aborted typhoid fever.

3. A possible aid may be had by a closer study of the early symptoms, that will allow us to attach more diagnostic authority to some of them than we have in the past; perhaps, also, by new methods of research to discover new pathognomonic symptoms that occur so early as to be always present even in aborted cases.

Such observations will themselves need to demonstrate their reliability by long and repeated trial before we can use them with absolute confidence in establishing the claim of any proposed abortive treatment of the disease.

The question at once presents itself. How far have these difficulties been overcome? The reply will be found along the line of the three methods proposed for overcoming the difficulties.

A large amount of evidence has been gathered bearing upon the possibility of arresting the progress of cases giving reasonable ground, in symptoms or lineage, or both, for believing them to be typhoid fever. This evidence will have varying weight with different minds.

Our German confrères have done much, by extended observation, to establish to their own satisfaction the utility of what they are pleased to call a "specific" treatment by calomel or sodium. Niemeyer finds the argument so convincing as to state "that after the accurate observations of Wunderlich we can scarcely doubt that by this remedy (calomel) we may in some few cases cut short the disease." Sansom and Wilkes, in England, Henry, Peabody, Nelson and White, in our own country, are also among those who should be gratefully remembered for their research in this direction.

I am not aware of any published record of observations bearing upon the second method—post-mortem appearances in supposed successful cases of aborted typhoid fever, in which death may have occurred during convalescence, from some other and unrelated cause.

To the third method of a more exact determination of the significance of early symptoms, contributions are occasionally coming in, the most recent, Ehrlich's urine test, being probably also the most valuable.

The present status of the problem may perhaps be fairly stated thus: It will require the utmost diligence and care on the part of the profession for many years to come, in order to add to the extended observations of the past sufficient data to make a final settlement of the question possible.

Results already reached by observers in Germany, France, England and America afford so strong a suggestion of the possibility (some of us will perhaps say, the probability) of a favorable solution of the problem, that duty as well as interest should hold us all to careful observation and record of all facts bearing upon it. It is this double impulse that prompts me to what I have to say.

That I am not advantageously placed for original investigation, in a locality where typhoid fever is rarely seen, is doubtless true, and might justly seal my lips against attempting an argument that rested chiefly on clinical facts. It does impel me to come even to an argument based chiefly on acknowledged facts of anatomy and pathology with much modesty and with great deference to the views of those whose clinical opportunities have been greater.

Let me state briefly at the outset those conclusions to which my own mind is tending, to which I shall hope to win your assent.

1. That there is a modified form of typhoid fever, seen in localities provided with a pure water supply, whose development is *slow*, whose *earliest symptoms* are *pulmonary*, and which deserves more careful study than it has received.

2. That there are early symptoms of typhoid fever to which we may attach much, if not a pathognomonic, value, a value greater than that we were accustomed to assign them a few years ago.

3. That certain facts of anatomy and pathology point not only towards the reasonableness of methods already employed for the so-called abortive treatment, but also of adding to those methods other expedients.

4. That the cases so far observed in which these methods have been followed, though insufficient to demonstrate finally their power to abort typhoid fever, are sufficient to strongly suggest their usefulness, and to demonstrate their harmlessness.

5. That these measures have a wide application outside of typhoid fever in febrile affections, especially in those difficult to classify.

We consider first, then, the evidence of the existence of a form of typhoid fever modified by conditions frequently obtaining in communities provided with a pure water supply.

The *avenues* by which the typhoid germs gain entrance to the body are the respiratory and alimentary tracts. Lodgment in either of these tracts involves danger. Lodgment elsewhere is probably harmless.

We may well believe that the initial lesions will be different, and developed with different rapidity, according as the vehicle by which the germs enter, is the respired air or the ingesta—whether fluid or solid. In the latter case the germs mingle at once with dead organic material, and in the lower bowel with fermenting fecal material—so finding the *best* conditions for rapid development. Here, too, is found that arrangement of blood-vessels and lymphatics which gives most favorable conditions for rapid absorption, having indeed this for its office.

Manifestly, germs entering by the respiratory tract will find much less favorable conditions both for increase and absorption, for here are in health no fermenting materials, and structure is adapted to interchange of gases rather than of fluids.

Explanation of the fact that typhoid fever may be contracted through germs presented with respired air has been offered by the statement that some of the germs lodging in the pharynx and mouth are swallowed with the saliva. We may admit as at least equally probable, that after primary infection of the bronchial mucous membrane, germs contained in phlegm which is coughed up, but fails of expectoration and is therefore swallowed, may carry infection to the alimentary tract. Pathology adds its testimony to the fact of infection through the lungs.

We can hardly fail to trace a growing tendency among recent authors to give greater prominence than before to the changes in the respiratory tract. A more or less severe bronchitis, with not infrequent enlargement of the bronchial glands, is fast gaining deserved recognition as one of the most frequent lesions. I must content myself with only three quotations from prominent authorities in support of this statement. Loomis says: "So constantly is catarrhal bronchitis present in this fever that Dr. Stokes proposed to call typhoid fever, bronchial typhus." Niemeyer says: "We find changes in the respiratory organs in all cases. The typhoid laryngeal ulcer already described is not infrequently found. There are always signs of an extensive catarrh even in the smallest bronchi, marked by dark redness of the mucous membrane, and scanty tough secretion. The bronchial glands are swollen, vascular, and occasionally have a medullary appearance, such as we shall describe for the mesenteric glands." Flint says: "The enlargement of these glands (bronchial) in some cases is considered as corresponding in pathological character to the enlarged mesenteric glands." This is a fact full of diagnostic significance for us, and of special importance where a well-protected public water supply reduces to a minimum the danger of infection from fluids through the digestive tract, and leaves open only the much smaller opportunity of infection through the respired air.

Three conclusions are inevitable from these facts:

1. That in cases where germs are received first into the respiratory tract, the early symptoms should be bronchial rather than abdominal.

2. That in such cases the symptoms should be slow in development, owing to the conditions unfavorable to rapid increase and absorption of the germs.

3. That such cases are likely to lack in their early history many of the typical symptoms of the disease, *i. e.*, to be atypical, and that room should be given for such cases in our consideration of early symptomatology and diagnosis.

We may add one more statement, viz: that in communities provided with a pure water supply, this is likely to be the most frequent type of the disease, a consideration of much importance in the symptomatology.

If any question the possibility of infection through the lungs they must do it in the face of the fact that most, if not all, recent writers concede it on the double ground of clinical experience and pathological observation.

The testimony of the inflamed bronchial mucous membrane and the enlarged bronchial glands is not easily gainsaid.

SYMPTOMATOLOGY.

We turn next to symptomatology, and especially to the question whether there are early symptoms to which we need to give more prominence than in the past. Whatever concerns diagnosis may find place here, for if we are to claim abortive treatment of typhoid fever, we shall need to establish reasonable, if not positive evidence that the disease whose short course we attribute to the treatment is indeed typhoid, and therefore one whose natural history is a course of several weeks' duration.

We find ground for diagnosis of disease from:

1. Its lineage, both as regards its parentage and offspring.

2. From symptoms observed during its course.

3. From post-mortem appearances.

Typhoid fever is a disease that may give us evidence from all three sources. *Aborted* typhoid fever, except as death may come in early period of convalescence from some unrelated cause, can gather its evidence from only the first two sources, lineage and symptoms.

The discussion of diagnosis, so far as it depends upon lineage, leads immediately and necessarily to the question of etiology. Is it ever of spontaneous origin? This we have not now time to discuss, and must content ourselves with a statement of the following postulates:

1. No recent prominent writer, with possibly one exception, ventures to positively affirm the negative as more than an individual opinion.

2. All recent and prominent writers mention both views with respect.

3. The strongest opponents of the spontaneous origin have in many instances to confess their inability to trace the relationship they claim between a given case and its parent.

4. Several of the most prominent recent writers are zealous champions of the spontaneous origin of the disease from putrescent organic matter.

Loomis admits that there are strong advocates of both sides, though himself not a believer in spontaneous origin. Murchison stoutly upholds spontaneous origin. Reynolds' "System of Medicine" makes this statement, "We must therefore conclude that this disease has a spontaneous origin in putrescent matter." Wilson, while himself a dissenter, admits the weight that must be given to such an advocate as Murchison.

The latest utterance from high authority I have been able to find is that of Dr. Janeway, who, in the course of a discussion in the New York Medical Society, last fall, defined his position as one of willingness to admit the possibility of its arising *de novo* from filth fermentation, but inability to admit it as more than a possibility.

In view of these facts, are we not justified in asserting: 1. That it must be said of both views: Not proven. 2. That inability to trace a suspected case to a preceding case need not deter us from a diagnosis of typhoid fever.

Three considerations must control our discussion and practical estimate of symptoms.

1. That we have to do with a disease whose pathognomic symptoms occur late in its clinical history.

2. That its early symptoms are generally obscure and not infrequently attend other diseases.

3. That if we shall ever arrive at a successful abortive treatment we shall see only the earlier symptoms, and even these modified by this treatment. If asked to give the most characteristic symptoms, we should doubtless answer: the eruption, and abdominal symptoms of tenderness and diarrhœa, and the peculiar temperature curve. If intestinal hæmorrhage is present it doubtless strongly confirms the diagnosis, but as that occurs in only one in twenty of well authenticated cases we can hardly class it among the symptoms to be expected, even in a case following the natural history of the disease. Eruption and diarrhœa rarely occur before the early part of the second week. Abdominal tenderness is often present among the earliest symptoms.

How many of the symptoms generally considered as most essential to a positive diagnosis we shall find in aborted cases, if such exist, will depend upon how early we have begun the treatment and how rapidly it proves effective.

In the cases that have fallen under my observation, eruption has not been infrequent, and abdominal tenderness quite constant. Diarrhœa has been of rare occurrence. The temperature curve we should also expect to find materially modified by successful abortive treatment, though retaining certain strong points of resemblance; quite enough to suggest, if not establish its parentage. We must, therefore, if admitting an abortive treatment, undertake a careful and correct estimate of the value of other and early symptoms.

Under the former expectant or symptomatic treatment, we found our most urgent motive to early diagnosis in prophylaxis in the interest of others than the patient. If an abortive treatment is accepted as possible, our motive is strongly reinforced by interests to be guarded in the patient's behalf, as, if successful, the treatment must begin early.

It therefore behooves us, in the future, to give the closest attention to the symptoms that will afford us, if not positive, at least reasonable, grounds for early diagnosis. A careful review of the statements of Loomis, Flint, Bartholow, Wilson, Niemeyer, and the "Systems" of Pepper and Reynolds, must lead us to assent to the following conclusions, which will also doubtless find verification in our recollection and experience:

We must limit ourselves to those symptoms that are sufficiently characteristic to be an aid in early differential diagnosis.

The onset is generally insidious. The frequency with which patients are, at first, unwilling to believe themselves seriously ill, and interpret the symptoms as those of a cold, is referred to by many writers.

Headache, often of great severity and obstinacy, but sometimes slight, is rarely absent.

Epistaxis is referred to by all writers as a usual symptom, varying from so slight a degree as almost to escape notice to profuse hæmorrhages.

Tenderness of abdomen, sometimes quite general, sometimes most apparent in right iliac fossa, is universally mentioned, and if to it is added ileo-cæcal gurgling, it gains still more significance.

Constipation is probably more frequent than diarrhœa during the first week, though several writers assert a tendency to more than the usual response to a mild laxative. There remain the three symptoms which, I believe, deserve more weight than we have been accustomed to give them, viz.: cough, temperature, and Ehrlich's urine test.

Cough, at first dry and hacking, is insisted on by several writers as an aid in many cases. My own view of its importance where we may fairly infer that infection, if present, has occurred through the respiratory tract, has been sufficiently stated. I question whether the spasmodic cough often seen in such cases does not depend upon pressure of enlarged bronchial glands upon the bronchi or upon the recurrent laryngeal nerve. This view would seem to be supported not only by the character of the cough, but also by the altered physical signs at right apex that often attend such enlargement.

Flint states that "a slight or moderate cough is almost invariably present." Niemeyer says: "In most, if not all cases, the cough and mucous expectoration betray the bronchial catarrh." Wilson says: "Bronchial catarrh is of sufficiently common occurrence to acquire a certain amount of diagnostic significance." Loomis writes: "Slight bronchial catarrh can hardly be regarded as a complication, it is so much a part of the clinical history of the disease."

Temperature.— In typical cases, the well-known temperature curve is observed early in the disease, if not from its beginning, but atypical cases are so frequent that we need to inquire whether there are not other features of temperature that will afford valuable aid. This, Wilson believes, we have in a marked tendency toward a constant morning remission, and this my own observation strongly confirms, as my cases have followed this rule even during the decline of temperature resulting from treatment. How widely atypical the temperature may be is shown by the outbreak among the German troops at the siege of Paris, where many fatal cases occurred without rise of temperature. Wilson calls attention to another feature of the temperature that he deems characteristic, viz.: that it is very labile, easily elevated by trifling causes, as first solid food, etc. He also makes much of sweating as a diagnostic sign.

Ehrlich's urine-test, though perhaps needing further confirmation, promises to be most useful.

We turn next to the discussion of anatomical and pathological facts that suggest the reasonableness of methods previously advised for the so-called abortive treatment of typhoid fever, and which suggest modifications of those methods and additions to them. The facts most significant in reference to our present purpose are: the period of the disease at which the various intestinal lesions occur; the location of the areas of intestinal ulceration; the relation of the large mesenteric glands to those areas.

The period of occurrence of the intestinal lesions calls for only brief statement. Enlargement of the solitary glands may be observed as early as the third or fourth day in some instances, and continues till twelfth or fourteenth day, when ulceration begins, and may continue till the twenty-eighth day. This statement is significant chiefly as indicating the narrow limits of the period during which an abortive treatment that depends solely upon intestinal antisepsis can have any hope of proving effective.

As to *location of lesion*, the duodenum escapes ulceration; the jejunum is very rarely affected; the ileum is most frequently the sufferer, and ulcerative lesions are frequently confined to the last four feet of the ileum, while the largest ulcers are almost invariably found in the last six inches of this portion of the intestine, *i. e.*, in the part just above the ileo-cæcal valve. It is, indeed, not infrequent, in cases presenting few ulcerative lesions, to find them limited to this small portion of the intestine. In the large bowel, the most frequent seat of ulcerative lesions is in the cæcum. If found beyond that, they grow less frequent as we go downward. The important points to establish in this connection are three:

1. Tendency toward such lesion increasing in the small intestine as we recede from the point of entrance of the *bile*—an antiseptic fluid—a fact that suggests the possibility, at least, that this natural antiseptic fluid proves generally effective in the upper part of the small intestine, and that therefore the addition of another antiseptic might so far extend the effect that the entire intestinal tract should escape injury from the bacillus. It is true that it is only a suggestion of such a possibility, and not a demonstration; a suggestion, however, of such force as to make it a duty to address ourselves diligently to the task of testing the possibility by all safe means.

2. The ulcerative tendency culminates at a point remote from the point of entrance of the bile, and behind an obstruction constituted by the ileo-cæcal valve, and analogous to the obstruction afforded by a stricture of the urethra, behind which the congestion, inflammation and ulceration that maintain a gleety discharge so often intrench themselves.

3. The large intestine developing the ulcerative tendency most in the cæcum, where fæcal matter is most easily long retained, and progressively less as we go toward the rectum, where evacuation of contents is most frequent and immediate.

The therapeutic significance of these facts lies chiefly in the suggestion that whatever we can safely do to reduce this natural obstructive tendency of the ileo-cæcal valve, and to keep the bowel comparatively free from long retained fæcal matter, will contribute to the recovery of our patient, and to the prevention of the worst features of the disease, dependent on ulcerative lesions. That the mesenteric glands most involved are always those immediately related to the ulcerated areas, is the fact that most concerns us in their pathology; a fact that has, as yet, proved rather suggestive than productive in my own thought.

Besides these pathognomonic, pathological lesions, there are other minor ones, of not infrequent occurrence, not considered pathognomonic, and yet of perhaps greater significance than we have been accustomed to think. These changes concern the upper portion of the alimentary canal and the respiratory tracts. The large swollen tongue, indented by the teeth; the swollen lymphatic follicles in tonsils and at base of tongue, and the not infrequent ulcerations found in pharynx, œsophagus, larynx and trachea, are referred to by most recent authorities as coincident with, and analogous to, the intestinal changes. These minor lesions afford important therapeutic suggestions as to addressing an antiseptic abortive treatment to the *entire* digestive tract from mouth to anus, and if possible to the respiratory tract as well.

It is also a suggestive fact that, even when no abortive treatment is attempted, cases are not infrequently found in which the first authorities (Loomis, Pepper, Reynolds, Wilson, Bartholow) accept without question the view that the solitary and Peyer's glands, after the enlargement observed in the early period of the disease, undergo resolution without ulceration, a fact that disposes finally of the objection often advanced against abortive treatment, that if the poison once gains entrance to the system, the disease must run through all its peculiar phases both of symptoms and pathological change.

Having these suggestive facts of the pathology of the disease, let us endeavor to build upon them a reasonable

THERAPEUSIS.

The movement to find an abortive treatment for typhoid fever has arisen in connection with the theory of the intimate relation of a specific germ to the disease. That view may be now fairly regarded as established, and, if true, it is only rational for us to search for some agent with which we may directly combat the germ. Indeed, we should be lacking in our performance of duty did we, as a profession, fail to make such search most diligently. The profession have not been forgetful of this duty, and as a result, the day seems near its dawning when we can set before ourselves more rational and definite aims in our therapeutics.

A therapeusis based upon the germ theory must, in view of our present imperfect knowledge, set before itself *two* aims:

1. To destroy the germs of the disease, or arrest their development.

2. To combat the ptomaines which are developed during its course.

We consider first the conflict with germs. This conflict we may well believe must be conducted on two fields:

1. On the surface of mucous membranes with germs that have not yet entered the tissues.

2. In the tissues with germs that have gained access to them.

The first field we find in the respiratory and alimentary tract. The possibility of the application of efficient antiseptic therapeutics to the bronchial mucous membrane is still open to question. Inhalation of antiseptic vapors or of oxygen, and internal administration of antiseptic drugs which are eliminated by the lungs, as, for example, eucalyptol, are as yet our best and very uncertain agents.

The alimentary tract we can deal more directly with, and through a larger variety of agents. We may approach it through two avenues—the mouth and the anus; in both cases our agents are likely to lose in effectiveness as we depart from the point of introduction, while that introduced into the rectum will be limited to the large intestine. As far down as the ileo-cæcal valve we must depend solely upon antiseptics introduced by the mouth, and our aim should be to use antiseptic measures along all the tract—mouth, œsophagus, stomach and intestine.

The mouth and throat may be reached by a mouth-wash or gargle frequently employed. The œsophagus, stomach and intestine we may consider together, as they must all be reached by some agent which is swallowed.

Would intestinal antisepsis be useful if we could effect it? We may find an affirmative answer in the following facts:

a. Even in health, a considerable portion of fæcal matter consists of micrococci and micro-bacteria, and that poisonous ptomaines are developed as a result of their activity.

b. The effect of nature's disinfectant fluid in the intestine, viz.: the bile and its apparent effect in restraining development of the germ in the upper portion of the small intestine.

c. The results of clinical experience.

May we safely attempt such intestinal antisepsis? Clinical experience must here again give us our only reliable answer. That we may safely take considerable amounts of some antiseptic materials into the digestive tract is well established, and if doubt exists, it must concern the question whether these amounts are sufficient to be efficient. Fortunately, we have a test for that in the presence or absence of phenol in the urine. It is a constant product of intestinal putrefaction, and is eliminated by the urine. Dr. Henry has demonstrated that during the use of thymol phenol disappears from the urine—a proof of effective intestinal antisepsis. Perhaps no more striking proof of the possibility of intestinal antisepsis could be afforded than this action of thymol:—It does not lower temperature when no fever exists; its effect is uncertain, and at best slight, if fever is not associated with disorder of alimentary tract; it proves an active antipyretic in typhoid fever where such disturbance, dependent upon germs, is at its height. Phenol here, too, disappears from the urine during its use.

Another clinical fact going to prove intestinal antisepsis to be both possible and safe is the large class of antiseptics that are effective agents for the arrest of diarrhœa dependent on germ development. Acknowledged advocates of this view are found in large numbers among the first names in the profession.

Other agents than germicides may aid in limiting germ production in the bowel. *Evacuants* may aid us by preventing long retention of the intestinal contents. Certain facts of clinical experience are sug-

gestive of the very practical value of evacuant measures in typhoid fever. Loomis says: "A mild diarrhœa through the entire course of the fever is a favorable rather than an unfavorable symptom." "When the diarrhœa is present in the early period of the disease, it is better to let it alone." The advantage of an active laxative in the initial stage of the disease is too generally conceded to admit of doubt —an advantage shown in reduction of the number of microörganisms, and in reduction of temperature.

If opportunity of treatment is offered early in the disease, the problem of controlling development of the germs in the tissues may not be so difficult, and may not require a charging of the whole body with an antiseptic sufficient to be destructive in every part. The problem will be a simple one, if we can find special hiding and breeding places of the germ within the body, where the bacilli are rapidly developed, and from which they, or the poisonous ptomaines which they produce, or both, are poured out into the blood in increasing quantity, till its power of disposing of them is exhausted, and the whole system succumbs to their influence. That such is the fact I think we must admit, if we would give a rational explanation of the phenomena often observed.

What are these hiding and breeding places? My answer rests in part on some well-recognized facts of anatomy and physiology, and in part upon some not irrational, but I will admit theoretical, inferences from these facts. In the ordinary process of absorption from the intestine, two carriers wait in the intestinal wall to convey the nutritive products of digestion into the circulation, viz.: the capillaries and the lymphatics. Material in solution, as the peptones, enters by way of the capillaries; material in suspension, as the emulsioned fat, by the lymphatics, aided, doubtless, by the peculiar structure of the epithelial cells, whose root-like processes of adenoid tissue extend to, and are continuous with, the wall of the lymph vessel in the centre of a villus. The closely packed rods on the surface of the epithelial cell first entangle the foreign body, and the amœboid activity of the cell conducts the entangled mass along the cell tissue and its root-like processes, till it reaches the cavity of the lymph vessels, so determining its entrance into a lymphatic, rather than a capillary.

We may fairly infer that this is also the pathway of the germs, as they would correspond more to the suspended oil globules than to the dissolved peptone. A few germs, perhaps, enter the capillaries, but we may well suppose that a fluid containing as much oxygen as the blood, with which it parts readily, would be capable of promptly disposing of a small number of such germs.

On the other hand, germs received into the lymphatics find a medium much less inimical to germ development, as it contains only a slight trace of oxygen. As these pass along the lymph vessels to the point of entrance into the general circulation, they are obliged to pass through, we might almost say to be filtered through, the pulp of the mesenteric glands, and many of them would be almost inevitably entangled there, and find, if not an ideal, at least a favorable, place for development, comparatively removed from oxidizing agents. Those carried on through the glands to the general circulation may be destroyed by the well-oxygenated blood.

Favorable as is the condition in the mesenteric glands for germ development, a much more favorable condition is found in the closed lymph follicles that constitute the solitary glands and Peyer's patches—entirely closed sacs, with no lymph current running through them, as have the mesenteric glands, to molest developing germs, the products of the glands escaping probably partly into the capillaries, and partly into the lymph sinuses that lie beneath them.

My view, supported, but I will admit, not proved, by the peculiar lesions of the disease, is that the germs, finding their first place of lodgment and increase in the contents of the bowel, find a second such point of lodgment and increase in the closed lymph sacs of the solitary glands and Peyer's patches and in the lymph glands of the mesentery, their rapid increase there giving rise to inflammation and enlargement of their structure, and to a constantly increasing rate of discharge into the blood, till that fluid is no longer able to destroy the germs or their products, the ptomaines, and the constitutional symptoms, characteristic of the disease, result.

If this be true it has an important bearing upon the possibility of abortive treatment. If intestinal antisepsis be possible we certainly have an early opportunity of aborting the disease, while germs are confined to the contents of the bowel.

If my view of the part played by the solitary, Peyer's and mesenteric glands be true, we have a second opportunity, after the germs have gained access to the tissues, but are practically confined in their development to these lymph structures, and the blood is yet able to dispose of such as are discharged into it. In partial support of such a view, let me quote from Loomis: "It is scarcely questioned that the typhoid poison, to a great extent, gains entrance to the system through these glands and lymphatics, and here produces the primary irritation."

This fact gives two most useful suggestions to one who aims at the abortive treatment of typhoid fever:

1. That though it were proven to be unsafe to introduce into the general circulation a germicide in quantity sufficient to be effective there, still he need not limit his antiseptic measures to the intestinal tract, but may make the effort to pursue the germs as far, at least, as their first place of hiding and increase in the tissues, viz., the lymph structures of the alimentary tract.

2. That probably the most effective agent for such pursuit would be a fatty germicide, if that can be found, or failing of that, a germicide so united with a fat that in the process of digestion it will be retained in the fat when the latter becomes emulsioned, and would be so absorbed by the lymphatics, as the fat is.

It is also possible that an insoluble germicide finely triturated, might prove effective. Or, that accompanying a germicide which is soluble in fats, with a diet specially rich in fats, would gain the same result.

The prospect of obtaining a germicidal effect in these tissues would seem to be excellent, as these organs lie directly in the path of absorption from the

bowel, and as the lymph current is at best a very slow one, allowing more time for the action of a germicide in the gland tissue, before it should be carried on into the general circulation.

The structure of the spleen, closely allied as it is to that of lymph-glands, suggests that it would be likely to prove a place of hiding and increase for the germs, after they had once been thrown into the blood faster than that fluid could dispose of them, and this seems to be the case as shown by its constant enlargement, a change subsequent to that in the intestinal and mesenteric glands; and by the enormous number of the germs found there in fatal cases by microscopic examinations.

The possibility of pursuing the germs to this point turns upon the possibility of safely introducing a germicide into the blood in sufficient quantity to prove effective, unless it should be found that the spleen, tolerant as it is of some forms of hypodermic medication, should be tolerant of some effective germicide given in that way.

It appears, therefore, that there are three periods in the disease during which we may address ourselves to germicidal, and so abortive, treatment of the disease:

1. While germs are limited to contents of the intestinal tract.

2. After they have gained access to the lymph structure of the intestine and mesentery, but while the blood is yet able to dispose of all the germs thrown into it from the glands.

3. After the production of germs has passed the limit of the blood's power to destroy them, and there occurs a general infection of the body.

Manifestly the difficulty of attaining our aim increases as we advance from the first to the third of these periods.

Whether a single remedy suited to all stages can be found; and if not, what choice of remedies we had best make for each stage; whether in treating each stage later than the first, we must carry over into it the remedies of the preceding stages, are problems that will require close observation and most patient research.

So much for the first of the aims we set before us, viz., combating the germs of the disease.

The second aim is to combat their product—a ptomaine or several ptomaines, *which*, we cannot yet assert.

The ptomaines are the latest, and a most welcome and suggestive addition to our knowledge of the causes of disease. They open up a wide field for surmise and investigation, and give more promise of leading us to rational treatment of disease than has any fact brought to our notice for several years past.

A brief statement in reference to them, which will serve to freshen recollection in our thought, will not be amiss. Perhaps we may best present such a statement in the form of the following postulates:

1. As vegetable cells, by an activity peculiar to themselves, develop a material known as an alkaloid, so animal cells in normal activity develop materials known as animal alkaloids, or ptomaines.

2. That ptomaines are also developed under other conditions, viz., in the normal processes of digestion, and under all circumstances where bacteria and putrefactive changes are active in the body.

3. That these ptomaines are numerous, the kind developed depending upon the character of the cell that produces them, the species of bacteria at work, and the stage of putrefaction.

4. That many diseases are attended with the development of a ptomaine peculiar to the disease, and which, if introduced into animals, causes promptly the development of symptoms allied to, if not identical with, the symptoms of the original disease.

5. That the ptomaines produced differ with each disease so far as investigated.

6. That these ptomaines produce symptoms affecting chiefly the heart, lungs, and cerebro-spinal system.

7. That the active agent producing the symptoms is not the germ, simply as a foreign body, but the ptomaine (or ptomaines) resulting from the growth of the germ and the changes it effects in albuminoid material of the tissue or of the intestinal contents.

8. That typhoid fever and lobar pneumonia are among these diseases.

9. That from cultivation of typhoid fever bacillus, a ptomaine has been derived which proved fatal to small animals in twenty-four hours.

10. From the urine of both typhoid fever and pneumonia patients two extracts have been obtained, either of which will produce death, but whereas one leaves the heart in diastole, the other leaves it in systole.

11. That several facts point to the conclusion that these ptomaines are thrown off by the excretions, and that such elimination, if rapid, is sometimes followed by a prompt disappearance of symptoms.

Such a fact is the sudden termination of symptoms after profuse sweating, as in intermittent malarial fever and in pneumonia. Such also is the remarkable success had in the treatment of yellow fever by hypodermic injections of $\frac{1}{6}$ to $\frac{1}{4}$ of a grain of pilocarpine muriate, reported by Dr. E. Habersmith. The profuse sweating and catharsis or emesis, or both, was followed by return to health in forty-eight hours.

This ptomaine enemy we may combat in the direction of preventing its formation, of destroying it by effecting its decomposition, by using strictly antidotal remedies and by hastening its elimination from the system. Doubtless the best, indeed perhaps only way of preventing its formation is by destroying or rendering inert the germs of disease, whether in the intestinal tract or the tissues. Therefore any germicide that we use effectively for *that* purpose will at the same time effect *this*.

The destruction of the ptomaine after it has once appeared in the system is something that we know little about, too little as yet for intelligent discussion, and we therefore dismiss it with this simple mention, and the suggestion that we may find encouragement to our effort in this direction in the fact that some at least of the ptomaines have an exceedingly unstable chemical equilibrium, and may therefore offer themselves easy victims to an agent that invites their constituents to more stable combinations.

The antidotal treatment we have probably, to a slight extent, unwittingly followed in the use of digitalis for heart-failure.

Elimination of the poison we may perhaps hasten in vigorous patients by profuse sweating. The remarkable results gained by Nelson with veratrum viride are perhaps attributable, in part at least, to the drug acting in one or both of these methods. It suggests another possible advantage of keeping the large bowel free from accumulation by large enemata, in addition to those already referred to. Especially is this the case when we remember that the large intestine is in health the place of most rapid development of bacteria and formation of ptomaines, and also an organ capable of carrying on active absorption. This is a field that waits our study, and seems to offer a rich harvest to the wise and patient seeker.

Having laid this foundation of many facts of anatomy, physiology and pathology, and I hope not materially weakened it by some theoretical considerations drawn from them, I am ready to present in detail the methods of treatment I am accustomed to follow.

No precaution, in effort to procure good ventilation, pure air, proper diet and careful nursing, is omitted. In cases presenting evidences of primary infection through the respiratory tract, I have sometimes employed creasote inhalations with Beverly Robinson's oro-nasal inhaler, with apparently good results, in at least diminishing cough.

The digestive tract receives antiseptic attention throughout.

Frequent use of an antiseptic mouth wash, generally Dobell's solution with listerine added, has been only recently employed, and I do not feel justified in urging it on the ground of any positive results demonstrated yet, but on purely theoretical considtions derived from pathological facts already noted.

To this antiseptic wash is added occasional doses of $\frac{1}{100}$ gr. of hydrarg. iodid. rubr. in 1 per cent. trituration with sugar—this to be used three to six times a day, allowed to melt on the tongue, and no fluid to be taken after it for several minutes. The antiseptic effect of this is doubtless felt in the mouth, œsophagus, stomach and bowel. In order to avoid the danger of salivation this is not used after the second or third day, unless very infrequently.

The main dependence for intestinal antisepsis as far as the ileo-cæcal valve, is sodium salicylate in doses of 10 grains every two to three hours, given either in capsules or Wyeth's compressed tablets. I am well aware that it has been pronounced by some high authorities to be not only useless, but also positively injurious; attention has been called to the fact that it is eliminated by the kidneys and may irritate those organs. I am grateful for the suggestion, and always watch the urine of my patients closely, while using it, but have yet to meet any unpleasant result from its use. The same may be said of the statement that it depresses the heart, diminishes respiratory movements, causes gastric disturbances, increases diarrhœa and tendency to hæmorrhage. I have watched for, but have not observed them, as in any way troublesome results. The only precautions in methods of administration that I have found necessary, have been to take a few swallows of some fluid nourishment before the capsules, and the addition, in some cases where the patient's circulation is poor even in health, of a few small doses of tr. digitalis.

There is a large class of available antiseptics. I have used sodium salicylate not because I know it to be the best, but because I found it safe and efficient. Other agents that call for very favorable mention are Dujardin-Beaumetz's solution of carbon bisulphide, thymol urged by Dr. Henry, *beta*-naphthol advocated by Dr. Bouchard; naphthalin advocated by Dr. Peabody seems to have a good record. In using it we need, however, to remember that it is objectionable in cases in which lung symptoms are prominent. In well selected cases I am disposed to think it may prove more effective than sod. salicylat., as Dr. Peabody finds it reduces temperature to normal in 24 to 48 hours, a more prompt result than I dare claim for the soda salt.

Salol I have been led to be suspicious of, as, if used in sufficient quantity it needs to be closely watched in reference to its effect upon the kidneys. Two 10 grain doses have, in my experience, once caused suppression of urine.

The iodine carbolic acid of Dr. Sansom, of London, also advocated by Bartholow, has in my hands proved very disagreeable to patients, and much less efficient than sodium salicylate.

Sulphurous acid, much praised by some, and the phenic acid treatment of Dr. Déclat, have served me well in a few cases, but not as satisfactorily as the sodium salicylate.

My third therapeutic agent is calomel, given in one large dose at the outset, if the case is seen before a free diarrhœa has set in. If seen later on, a dose of equal parts of castor oil and syr. rhei has the preference, as an efficient but soothing laxative, which tends to limit its own action. If abdominal palpation and percussion give no sign of accumulation in the bowel, even this would be omitted in cases with free diarrhœa. The use of laxatives in the disease has been much inveighed against. In Reynolds' System we find the statement, "Calomel should be avoided, its action is too irritant." One cannot but wonder, prior to personal experience, whether the danger is not overstated by authority, when reading of the results gained by the Germans, as shown by statistics covering hundreds of cases, and of Dr. Bartholow's large confirmatory experience. We will rather assent to the statement of that sage among medical teachers, Dr. Loomis, who says: "The greatest caution must be observed in the use of cathartics in any stage of the fever." The German mortality, reduced from 13.2 per cent. by the expectant treatment to 8.8 per cent. by an active calomel treatment continued during the first week, may go far towards relieving our minds of apprehensions of evil effects from one full dose at the outset. Bartholow comes strongly to our support with advocacy of 7½ to 10 grain doses every alternate night till the third or fourth day. Dr. Peabody, who believes that for two years past he has aborted many cases coming

under observation during the first ten days of the disease, employs as an initial measure a 10 grain dose of calomel. Niemeyer, Liebermeister and Wunderlich also lend the support of their strong names to the treatment.

Apart from my own confirmatory experience, I cannot but conclude from the testimony of others that the measure is at once safe and useful. I remember to have heard Dr. Fordyce Barker give his approval to such an initial dose as a wise rule.

My evacuant agent for the remaining course of the disease, after this initial dose of calomel, or castor-oil and rhubarb, and also my chief reliance from beginning to end of the disease for an antiseptic agent below the ileo-cæcal valve, is a daily large enema of an improvised decoction of chamomile flowers and borax. The nurse is instructed to add a small handful of chamomile flowers to 3 pints of water, and allow it to simmer, without boiling, on the stove for one hour; then to strain it through cheese-cloth to remove any woody fibre that might prove irritating; add a teaspoonful of borax and administer as an enema, giving all that the patient can be persuaded to take. At the second or third using, if not from the outset, an adult will generally take all. Retention for a few minutes is not essential, but doubtless increases the beneficial effect. At times, no little tact is required to induce the patient to take the necessary amount. In difficult cases, the Sims position, and momentary pauses in the administration, will facilitate the process. A slight amount of discomfort during the giving of the enema is not unusual, but need not deter us.

Some writers give urgent warning against the use of such enemata. Wilson says: "Large enemata are attended with danger arising from their liability to set up energetic peristaltic movements which may extend to the lower part of the ileum." "The constipation of enteric fever is most safely treated by the daily administration of small enemata of strong warm soap-suds or of thin gruel." Much of the acknowledged force of this argument as applied to advanced cases in which there is a probability of ulceration having occurred, is lost, when we apply the treatment in the early history of the case, where the abortive treatment has its best opportunity.

In treating advanced cases the size of the enemata should be reduced. The advantage of it in early treatment is enhanced by the "peristalsis extending to the lower part of the ileum," as the measure proves in that way not only an evacuant agent for the large bowel, so removing obstruction from before the fæcal matter lying just above the ileo-cæcal valve, but also as an active evacuant of this matter in the lower portion of the ileum, at the point of most frequent ulceration.

The vast importance of any agent that will give safely a daily evacuation of the material tending to collect here, so preventing not only the irritation resulting from such collection and retention and consequent fermentation in the early history of the disease, but greatly diminishing the amount of absorption of ptomaines and septic material likely to occur through the abraded surfaces of the ulcers—the importance of such an agent is, I believe, incalculable. We may, perhaps, give emphasis to it by calling to mind the fact that, while the bladder in health allows of almost no absorption, in diseased conditions resulting in ulceration some topical applications have to be most cautiously used, in order to guard against the danger of absorption through the abraded surfaces.

Another consideration adds to our estimate of the value of this and of intestinal antisepsis carried on *per os*: Wilson has pointed out most clearly that the fever has two distinct movements: the first or primary fever, due to specific germ infection; the second, an irritation or hectic fever from ulcerations, sloughing and resorption. Even if the impossibility of destroying or retarding development of the specific germs in the intestinal tract or the tissues, or of combating the ptomaine which appears coincidently with their development and activity, should be demonstrated, there yet remains here, in conflict with the causes of this septic fever, a large field for abortive treatment of typhoid fever. We might well hope to limit the symptoms to the type represented in the class of cases grouped by most writers under the head of abortive typhoid, in which, from failure of the enlarged solitary glands and Peyer's patches to ulcerate, we have the course of the fever limited to that due to specific germ infection.

The chamomile and borax I have employed, not because it is necessarily the best, but it is simple and seems to be efficient. It combines in each of its constituents agents that are mildly antiseptic and astringent. Stronger antiseptic solutions could doubtless be safely used. In future cases I shall be disposed to use the solution of carbon bisulphide, recommended by Dujardin-Beaumetz. He says of it: "For six months I have been giving this carbon bisulphide water in typhoid fevers in doses of from 5 to 10 tablespoonfuls a day according to the intensity of the diarrhœa, and I have obtained most satisfactory results from the point of view of intestinal antisepsis. Nor have I seen any untoward accidents from its employment. It has proved to be possessed of efficacy above all other medicaments." It is true he mentions its use by the stomach alone, but I should not hesitate to use it largely diluted as an enema, as well as *per os*.

Other promising therapeutic agents for enemata are oxygenated water, solution of peroxide of hydrogen and, as supplementary to, rather than substitute for, fluid enemata, gaseous enemata of oxygen.

This is the treatment that I commend to your favorable consideration. It is *new* only in the particulars of attempted antisepsis extending through the entire alimentary tract and to the lungs, and in the use of large and antiseptic daily enemata.

Does this treatment abort typhoid fever? I cannot answer positively, because, as we have seen, typhoid fever rarely, if ever, admits of an early positive diagnosis. I believe that it does:

1. Because the method commends itself to me as rational, and not unlikely to give such a result.

2. Because competent observers are persuaded that by like means—less the enemata, which I believe to be a most potent agent—they have frequently aborted

pronounced cases of the disease (Peabody, Henry, Sansom).

3. Because my own experience is sufficient alone to justify such a conclusion to my own mind.

It must be a matter largely of judgment, and therefore I cannot find fault with those that dissent. I have grown familiar with the answer that many objectors make to the second and third reasons offered for "the faith that is in me." "There was an error in diagnosis; the cases, if arrested, were certainly not typhoid." I heard it first from Dr. Alonzo Clark in the course of one of his lectures on typhoid fever. "Gentlemen, if you arrest a fever you have diagnosed as typhoid, that fact is proof of your error in diagnosis." I question whether the day is not passed when fair-minded men will venture to assert that as more than an opinion. I trust the argument, with such record of the experience of others as I have been able to offer, would commend itself to you for trial, without evidence from my own experience.

I have already so far trespassed upon your time that I am impelled to offer only a few illustrative cases to meet the demand of this practical time, that asks every one who advances a theory to establish it by evidence. The demand is perhaps more reasonable, since the method has some new features, clinical evidence of the value of which cannot be had as yet, unless offered by my cases. As the early positive diagnosis of typhoid fever is of at least questionable possibility, I will narrate the symptoms and leave each one to draw his own inferences. One group of seven cases in the same family, using the public water supply, which was doubtless pure, so that we might look for infection through respired air, will be representative.

First Patient.—Young man, much indisposed for over a week before I saw him. Severe cough which did not yield to ordinary remedies. Seen December 25. Frequent chills through the night; temperature 102°; headache; marked abdominal tenderness, most marked in right iliac fossa, with moderate tympanites and distinct gurgling. Eruption on abdomen fourth day after seen. No looseness of bowels. Morning temperature 2.5° less than evening. Temperature steadily declined during treatment; normal on sixth day.

Second and third cases taken ill December 30, five days after the first was seen. No. 2 had no marked chill. First temperature observed 101.3°; headache; nose-bleed. Eruption on abdomen (three spots) the fifth day after treatment was begun; tenderness over abdomen quite general, most marked in right iliac fossa; gurgling slight; marked morning remission; temperature normal on fifth day.

No. 3. No distinct chill, but frequent chilly sensations, headache, nose bleed, slight abdominal tenderness, spots of pneumonia; highest temperature 104°. Temperature had fallen nearly to normal on sixth day, when pneumonia set in; confined to bed for two weeks, no eruption observed.

Case 4.—Chill; temperature 102.5°; marked abdominal tenderness, tympanites and gurgling: nose bleed every day. This patient was ordinarily subject to nose bleed once in a week or ten days, but had never before suffered from it with such frequency. Temperature normal on fifth day.

Case 5.—Severe chill; marked tenderness of right iliac fossa with moderate tympanites; highest temperature observed 102.75°; headache; no eruption. Temperature normal on sixth day.

Case 6.—Headache severe; no nose bleed, no abdominal tenderness or gurgling, no eruption. On bed but not undressed most of three or four days. Highest temperature observed 100.75°. Normal on the fourth day.

Case 7 suffered least; no chill, no abdominal tenderness, headache, no nose bleed; temperature 100.5°. No eruption. Normal temperature on fourth day. A partial explanation of the lightness of the symptoms in the last two cases may be that they had been previously using 1 per cent. trituration of hydrarg. iodid. rubr. as a prophylactic measure.

The temperature of all showed a marked morning remission, and all felt, during and after the fever, a degree of prostration out of proportion to the other symptoms. Enlargement of spleen was marked in No. 1 and slight in No. 2. All had a troublesome cough, as might be expected, considering the probable avenue of infection, the lungs. Nos. 1 and 2 sweat profusely during convalescence.

Case 8.—The patient was exposed to typhoid fever during his care of a friend who died with well-marked symptoms of the disease, viz., headache, epistaxis, tympanitis, abdominal tenderness, ileo-cæcal gurgling, diarrhœa, and as typical an eruption of typhoid fever as it has ever fallen to my lot to see.

The friend was not under my care, but I saw him a few times at the request of his physician. Careless attention of those nursing him left his linen often soiled with the discharge, and the air of the sick-room foul.

The person who later became my patient laid out the body of his friend and complained bitterly of the foulness of the body and linen. Eight days later he suffered from serious malaise, chilliness, and slight headache, but did not call medical aid for a week, during which time his symptoms grew constantly worse, and thirst, feverishness, abdominal tenderness and entire loss of appetite, developed. When I first saw him temperature was 104°. Headache intense, abdominal symptoms of tympanitis, tenderness and gurgling well developed, and patient had had epistaxis. Next day eruption on abdomen appeared. Temperature steadily declined to normal on fifth day.

Case 9 also assisted about the patient who died, and had symptoms corresponding nearly in time of development with Case 8, but of less severity—viz., quite pronounced chill, headache, temperature 102.6°, abdominal tenderness, pain and tympanitis with ileo-cæcal gurgling, but no eruption. Seen at same date as preceding. Temperature normal on fourth day. Both 8 and 9 had slight, dry cough.

Case 10 occurred in a locality where well-marked cases existed at same time. Patient was seen on third day of decided symptoms. Temperature 103.4°, severe headache, dull countenance, epistaxis very slight, abdominal distension and tenderness, bowels

constipated, eruption appeared distinctly one week after first observation. Patient was at times slightly delirious. Temperature declined to normal on twelfth day. I might multiply cases did time allow.

The objection will doubtless be raised that the leading hospitals have tested and discarded as useless the abortive treatment of typhoid fever. To this two replies at once suggest themselves:

1. That typhoid patients are rarely received into a hospital till the disease has passed beyond the period best adapted to an abortive plan of treatment.

2. That the methods thus far tried have lacked what I believe to be a most essential factor, viz.: the large antiseptic and astringent enemata.

I can hardly close without commending the treatment as remarkably effective in the irregular forms of fever, dependent, as doubtless many of them are, upon germs and resulting ptomaines. What I would specially urge is not the use of sod. salicylate by the mouth, or of borax and chamomile by enema, or of creasote vapor for inhalation, but of some efficient antiseptic by all these methods.

The statements of Drs. Peabody and White lead me to think it not unlikely that later trial of naphthaline and sulphurous acid may change the estimates of their value, derived from a few cases in my own experience.

Permanent reduction of typhoid temperature to normal in 24 to 48 hours, which they report, I have not yet seen in well-marked cases by the use of sod. salicylat. It is most earnestly to be hoped that these gentlemen will give us more detailed accounts of their methods and results.

What agent or agents will prove best can be shown only by long-continued and most careful tests. That the results already reached put upon us all the duty of aiding in the settlement of the question, is a conviction that, individually, I cannot escape.

Wilson states that "typhoid fever destroys more lives that could be saved than any other acute disease whatever. We that accept the abortive treatment of the disease, as he does not, repeat the statement with an added and sad emphasis, and find ourselves urgently impelled to persuade all to test a measure in our thought so full of promise. No problem more occupies the thought of the profession to-day, none so busies its laboratories with earnest research, none give such promise of yielding for us better therapeutic resources and for our patients a more certain recovery from disease.

It behooves us to take a part in the movement—at least to study closely its results and if possible to contribute to them.

I append an instructive letter from Dr. Horace C. White, and would also refer the reader to Dr. Peabody's statement of his own and his friend's experience, as given in the published proceedings of the Association of American Physicians.

Ehrlich's urine test is admirably stated by Dr. A. Jacobi, in the same transactions.

Dear Doctor:—In answer to your request for a statement of my experience in the abortive treatment of typhoid fever by the use of sulphurous acid, I am obliged to write only a hasty reply.

The *British Medical Journal*, of Dec. 3, 1870, contained an article on the administration of sulphurous acid in typhoid fever, by G. Wilks, of Ashford, Kent, in which after giving his experience in its use he says: "I will state distinctly what I claim for the sulphurous acid in typhoid fever; that it arrests the further development of the fever poison, and by continuing this arrest long enough, exterminates the fever. Briefly, it is an antidote."

In 1871, I began the use of this remedy when practicing in Maine, in a locality where typhoid was prevalent and severe. My expectation was more than realized, and my results would justify the claims of Dr. Wilks, in nearly every case. I have continued to use it for the past 16 or 17 years and have lost none of my confidence in it.

Since my removal to the suburbs of Boston where we have much less typhoid fever, I have used it very extensively in scarlatina, diphtheria and kindred diseases, with equally good results. In fact, there is no remedy that I feel more confidence in prescribing than this. It has never failed me in but one case of scarlatina, and I lost no confidence in the remedy in that case, as the child was already in *articulo mortis* when I was called. It has never failed me in diptheria, except in a very few cases which were complicated with croup, or in other words, where the membrane was located far down the trachea.

I know these are strong statements, but I think I have used the medicine long enough (nearly 17 years) to have been able to have eliminated the enthusiasm which attaches itself to a new remedy.

And now allow me to answer the question: Why is not the sulphurous acid as potent a remedy in the hands of others as it has been in mine? The answer to this question is not difficult. 1st. A misconception of what the medicine is. What is labeled sulphurous acid, is a solution of sulphurous acid gas in water. Being chemically SO_2, it is often supposed to change to sulphuric acid SO_3, by exposure. This is not so. In fact, it is difficult to change SO_2 to SO_3, but when left in a partly filled, or not sealed bottle, the gas escapes, leaving an almost inert substance. As a consequence, prescriptions are seldom filled with the medicine of proper strength, unless the druggist is accustomed to its use. I have had no small amount of trouble on this account even with those we generally consider very reliable druggists. In fact, I seldom get the medicine of proper strength on prescription until the druggist has been labored with.

2d. My confidence in the remedy and in its safety leads me to prescribe it freely and also to disinfect the rooms at least twice a day with the gas by burning sulphur, believing that if the germs of disease can be destroyed by fumigation, as has been the practice for many years, that the air can be kept free from germs or sterilized by frequent use of the gas.

But I am wandering from the subject. In typhoid fever, when called early, I expect a decided remission of the fever in from 24 to 48 hours, and the fever is kept a very mild type if not completely aborted ever after. I give it mixed with syrup and diluted with water, also by inhalation. I will close this hastily written letter by quoting the closing words of Dr. Wilks' paper: "Very possibly, I have failed to convince you of the advantages of using this drug; but let me again remind you of the plain fact that of 173 cases of this fever occurring in our practice during the past fourteen months, two only died, and those two did not take the acid; for the one it was not prescribed, the other was a drunkard and would take nothing. Of the 171 who took sulphurous acid not one lost his life, and there were few who were not convalescent within fifteen days of commencing the treatment. Surely such a result will induce you to try the medicine for yourselves when opportunity offers."

Very sincerely yours,

HORACE C. WHITE.

THE CASE OF THE EMPEROR OF GERMANY.

Expediency in Diagnosis—Would it Legitimately Guide the Treatment?

BY HENRY FRASER CAMPBELL, M.D.,
OF AUGUSTA, GA.

The momentous case of Frederick, Emperor of Germany, which for many months has called forth

the tender sympathy and inspired the fervent prayers of benevolent hearts throughout the civilized world, recalls to mind one in my own experience; and I am moved to report its incidents from notes accurately taken at the time.

The principal interest and turning point in this case rested, as will be seen, upon a change of diagnosis accepted in despair, to replace a verdict which, though based upon apparently the most reliable data and rational conclusions, had still served to lead the attendants unhappily away from the course of medication imperatively demanded. The measure of rejecting the more rational view because hopeless, and of being guided in treatment by a questionable one on account of its bright promise of a happy result, would hardly be acceptable as to its logic; but such "perversity in diagnosis" may sometimes be regarded as expedient in practice.

In 1874 I was called to visit in consultation with two of my colleagues, both distinguished for their accuracy in diagnosis and long known as teachers of pathology, Mr. D. H. W., aged 30 years. I found the patient in a condition of great emaciation and feebleness from deficient nutrition, being unable to take adequate food on account of the distress at all efforts at deglutition. Aphonia was complete. He could with difficulty express himself in whispers.

The cutaneous surface was free from maculæ and from all eruptive or other morbid manifestations of any kind, nor had there appeared any cutaneous affection at any period in the history of the case. He was free from nausea, and the digestive organs were apparently otherwise intact under the digestion of fluid nutriment. His sleep was often interfered with by irritative cough resulting in an expectoration which was purulent in character. His respiration was oppressed, and the attacks of dyspnœa had recently become more alarming and frequent.

Exploration of the fauces discovered a reddened and tumid condition of the pharyngeal walls with enlarged and prominent follicles, and here and there small patches of superficial ulceration covered with a thin deposit of grayish matter.

At the time of the conference the condition of the patient generally and the extreme irritability of the fauces, precluded the use of the laryngoscope; but previous examinations with this instrument were reported to have revealed tumefaction of the glottis with narrowing of the rima and a thickened and stiffened condition of the vocal cords—no tuberose elevations within the larynx were reported as the result of this exploration. There were no glandular enlargements in the submaxillary space or in any other part of the cervical region.

For nearly a year past this young man had been subject to soreness and discomfort of the throat, with cough and increasing hoarseness. He was free from fever at the time of this examination.

At the time of the conference the patient had but recently returned from a health resort, where systematic treatment had been interrupted. This treatment formerly consisted in codliver-oil, tonics, and nourishing fluid diet constitutionally, and locally by astringent and alterative gargles—the affected surface of the pharyngeal wall had been brushed with a mild solution of bichloride of mercury.

While in attendance upon another member of the family, this case had been confidently reported to me as one of "cancer of the throat." It was further stated that this was the diagnosis of the attending physicians, and that their prognosis was entirely unfavorable.

From the fact that no history of syphilis could be developed in connection with this case, and also from the exemplary character of the patient as well as from the unquestionable sincerity and candor of his statements, taken in connection with the somewhat aberrant and unusual assemblage and order of symptoms, the two eminent gentlemen in attendance had entirely excluded syphilis from the diagnosis, and consequently from the measures of treatment.

I was asked, "Upon what grounds do you propose constitutional treatment in the present case?" I replied, "Certainly not upon a well assured diagnosis of syphilis, but a different diagnosis, whether of scrofula or cancer, condemns him to despair now, and to death in a few months—on the other hand to admit the suspicion of syphilis as an element in the etiology, opens to him light and hope and a possibility of restoration to health and a vigorous manhood." My diagnosis was but little more than a doubt of the expressed opinion of the attending physicians—I simply proposed to give the patient the benefit of that doubt as his sole chance of life.

I was courteously requested to formulate such measures of systematic treatment as I thought proper to propose. Without accepting formal charge of the patient, I suggested the following treatment:

℞ Ferri et potassæ tart. ..... ℥vj.
Syrupi ..... ℥viij.
M

℞ Potass. iodidi ..... ℥vj.
Elixir. simplicis (vel aquæ) ..... ℥viij.
M

S. Take one or two teaspoonfulls from each vial three times a day in half a glass of water, before or after meals.

It was recommended that the mixture be taken through a glass tube, to avoid staining the teeth. The following was also recommended:

℞ Potassii chlorat ..... ℥iij.
Aquæ destill. ..... Oj.
M S. Use as a gargle frequently during the day.

Such fluid nourishment as could be ingested was to be taken freely. In case of failure of deglutition, particular directions were given for supporting the patient by rectal nutrition; if necessary, the medicines were to be administered by the same process. A mild mercurial course was advised to be combined, somewhat later, with the above modification of the iodide element of what is known as "the mixed treatment" for constitutional syphilis.

Ricord has been quoted as saying of tartrate of iron and potassa, that it is the sworn enemy of phagedœna. I have found it for thirty years the sworn enemy of the suppurative process as well, under certain conditions; and during that entire period I have seldom prescribed iodide of potassium in certain forms of constitutional syphilis without combining it with this particular one of the ferric salts. It is to

this combination I refer when I speak of a modification of the mixed treatment.

Not recognizing at the time of the consultation that this patient had been formally relinquished into my hands for treatment, I did not see him for over twenty days from the time of my first visit. At this time I received a note from the patient, informing me that he was better, and desired to know if I wished any change in the medicines, as he had finished that prepared by the first prescription.

Greatly gratified at the intelligence that anything at all favorable had followed in so short a time as the result of medication in a case apparently so nearly hopeless, I at once went to see the patient. I certainly was not prepared for the marvellous improvement. His complexion was greatly improved; he had evidently gained flesh; had entirely recovered his voice, and was cheerful and even sprightly in his demeanor. He stated that his appetite was good, and that for the past five or six days he had been able to take solid food with little or no discomfort. The cough and expectoration had greatly abated, and on examination of the fauces the ulcerations were found to be greatly diminished, and had assumed a more healthful appearance; while the prominent and tumid follicles had regained nearly their natural appearance. The former prescription was renewed, and at a subsequent period the iodide of potassium and tartrate of iron mixture was reduced to two doses a day—morning and noon—while there was added to the treatment 1/6 of a grain of protiodide of mercury, to be taken at bedtime.

It is not my design to detail the subsequent history of this anomalous case of syphilis, nor that of many others of a clearly recognizable character affecting the air passages, under my observation and within my experience. For ten years after the date of treatment he was in robust physical health, nor has there appeared at any time the slightest manifestation of the disease of the larynx or fauces.

With all our illumination on the nature of constitutional syphilis and the rules established for its indisputable recognition as well as curative treatment, there still remain many abnormal and obscure conditions, of which almost every practitioner of extended observation or protracted experience can readily recall one or more instances. The entire absence of history, either in heredity or in direct acquirement; the unimpeachable and immaculate character of the patient, together with the irregular and aberrant presentation of symptoms, all combine to add to the obscurity and inscrutableness of the complex phenomena.

In cases so obscured, it is well known that systematic treatment based on suspicion has come to be recognized as a legitimate means of arriving at a correct and assured diagnosis.

In the case above summarily reported, this device—in the face of a difficult, and withal a misleading, interpretation—was all that was left upon which to develop a true diagnosis or a fragment of hope for the patient.

Although purity or impurity of character is generally unavoidably taken into the estimate of probabilities contributing to the establishment of the diagnosis in syphilis, we may say that the time is long past when in the mind of the enlightened physician, or even in the estimation of intelligent communities, the existence of constitutional syphilis, even in its most indubitable manifestations, can be regarded as necessarily an aspersion of the virtue or morality of the individual so affected.

Besides impure sexual relations and heredity, how varied and multitudinous are the methods and avenues of its transmission: The cigar, the smoking pipe, the drinking cup—whether in times of peace upon the great highways of travel, or during war in the emergencies of the field or in camps, often must become the common chalice of refreshment for officer and common soldier, from the lowest to the highest in rank. These are some of the means, reasonable and probable, by which inoculation of syphilitic stomatitis may infect the entire system of the thirsty and the unwary.

It would scarcely be considered legitimate to accept or to deny any of the varying opinions as to the exact nature of the disease expressed by the attendants of the Emperor, all of the highest rank as specialists and diagnosticians; these have been made public through authentic bulletins: cancer, scrofula, perichondritis, have each had their turn in occupying the minds of all who read and contemplate these announcements of his constantly varying condition. All agree upon the saddening recognition of his imminent danger, if not of his near and rapidly progressive approach to death. Besides the natural advance of the disease—whether scrofula, cancer or syphilis—death may come to him suddenly, by the rupture of an abscess into the trachea, or by some unavoidable accident attending even the most skilful removal and replacement of the tube. Progressive improvement seems little thought of in his present condition; a reprieve of a few days gives temporary hope, which in its turn is dashed by the recurrence of abscesses, fever, and intense alarm.

It is in this condition of the sufferer upon whom all eyes are turned, and at whose restoration all would rejoice, that I have ventured at this time to discuss that which is perhaps as yet not a fully accepted policy in the guidance to treatment. This I have described in connection with the case above reported and also illustrating this principle. Expediency in diagnosis—that is, to select from the several theories of the disease that which is most hopeful, and allow this diagnosis—perversely, if you please, even though not the most logical—to become the guide to treatment.

Cancer is incurable; scrofula in such advanced condition is also incurable; syphilis, even in its most deplorable advance, is often amenable to treatment, and complete restoration possible. Then why not let expediency guide the treatment? This, then, I would explain, is what is meant by *expediency in diagnosis*.

April 28, 1888.

MEDICAL PROGRESS.

CEREBRAL SYMPTOMS OF PNEUMONIA IN CHILDREN.—DR. L. EMMETT HOLT read a paper before the Medical Society of the County of New York on March 26, in which he drew the following conclusions: 1. Cerebral symptoms in the pneumonia of children were very common. 2. Convulsions belonged almost without exception to infancy, being rarely met with after the age of 2 years. Occurring at the onset, they belonged essentially to lobar pneumonia; they did not indicate a bad prognosis, nor even in most cases a severe attack. When late convulsions came on, death within twenty-four hours might confidently be predicted. 3. Delirium came oftenest between the ages of 5 and 8, usually in conjunction with extensive disease and high temperature. These cases, although severe, with but few exceptions ended in recovery. 4. There was no such intimate association between cerebral symptoms and apex disease as had been frequently stated. Such symptoms occurred in only about one-fifth of the apex cases. 5. Nervous symptoms occurred much more frequently when the disease was extensive and the temperature very high. He emphasized two points in treatment: First, that in the hyperpyrexia of pneumonia the cold pack was a safe and the most efficient means of reducing the temperature. Second, the use of antipyrin to allay restlessness, quiet delirium and cough, and promote sleep. Doses of 2 or 3 grs. were sufficient in an infant of from 6 to 9 months. It might be repeated every six or eight hours.

DR. ANDREW H. SMITH thought, with regard to the immediate cause of the cerebral symptoms in pneumonia, that the cases might be divided into three classes: 1. Those in which the cerebral symptoms were brought about by the direct influence of the pneumonic poison. 2. Those in which they resulted from high temperature. 3. Those in which they resulted from exhaustion. He regarded lobar pneumonia as an infectious disease, and as likely to be ushered in by cerebral symptoms, like other infectious diseases. The convulsion in children corresponded to the chill in adults. There might be apparently broncho-pneumonia, yet associated with it might be isolated spots of the croupous variety. Convulsions were in some instances associated with exhaustion. He was inclined to ascribe delirium in most cases to high temperature. Then there was a group of cerebral symptoms more or less of a typhoid character which occurred in the later stage, and were the result of exhaustion. He thought kidney complications might cause cerebral symptoms in some cases. Gastro-intestinal disturbances also produced their share of cerebral symptoms. He agreed with Dr. Holt regarding the beneficial effects of small doses of antipyrin in subduing restlessness and insomnia.—*N. Y. Med. Jour.*, May 26, 1888.

SALICYLATE OF SODIUM IN TONSILLITIS.—MR. CHAS. GRABHAM, says until recently I was not aware that the virtues of this salt in this painful and obscure disease were not more generally known to the profession. I myself have used it for eight years, and I certainly must have seen reports of cases so treated in the medical literature of the day, before so doing. There can be no doubt of its efficacy in preventing an attack of quinsy from running its usual course. I have treated more than a hundred cases with it, and in the great majority speedy resolution has taken place; in most of those cases which went on to suppuration the remedy had either not been given early enough, or the doses had not been large enough, nor given with sufficient frequency—a most important point where salicylate of sodium is employed, whether in acute rheumatism or tonsillitis. In incipient cases, and especially those occurring in gouty or rheumatic habits, this drug acts like a charm. I give to an adult from 10 to 20 grains every two hours, or 10 grains every hour until relief is afforded, aud then the dose is gradually reduced. I eschew all astringent gargles, and direct the patient to use hot milk and water ones, or when the breath is very fœtid, warm gargles of permanganate of potassium, or hyposulphite of sodium. In cases where the patient has had several attacks of the disease, small doses do no good at all, and even large ones sometimes fail. Nearly all my failures have been in this class of cases.

A few years ago the attention of the profession was called to the wonderfully successful results obtained by treating tonsillitis with bicarbonate of sodium, in doses of from 10 to 20 grains every two or three hours. I have been trying it in some of those cases where the salicylate has failed, and although I have no extended knowledge of its effects, I feel justified in saying that it appears equal to the latter in subduing the inflammatory action, and preventing suppuration, besides being free from the tendency of salicylate of sodium to produce tinnitus, vertigo, and deafness. In the case of a gentleman aged 34 years, who told me he "had spent the last six years of his life in getting quinsy and getting rid of it," and in whose case the salicylate had failed, I advised him to take 10 grains of the bicarbonate every hour as soon as he felt an attack impending, with the result that several have been rendered abortive.—*Practitioner*, May, 1888.

INTRAPLEURAL INJECTIONS OF STERILIZED AIR IN THE TREATMENT OF PNEUMO-THORAX.—Much interest has been aroused over the presentation by PROFESSOR POTAIN, before the Académie de Médicine, of a patient whom he had cured of pneumo-thorax by the injection of sterilized air. Such a statement seems at first paradoxical, but an account of the case explains it. The patient, 23 years of age, suffering from incipient phthisis, was suddenly attacked with fever, which lasted fourteen days and was accompanied with extensive pleuritic effusion, accompanied, at first, with air in the pleural cavity. As the effusion increased the lung became compressed, and the opening connecting it with the pleura was closed. The effusion finally reached the fossa supraspinata, and the patient's condition called for interference. If the effusion were withdrawn, however, it was thought probable that the connection with the lung

would be opened, and the pneumo-thorax would reappear. Professor Potain therefore devised an apparatus, in the shape of a double cannula connected with a manometer, by which, as fast as the liquid was withdrawn, sterilized air took its place. The air was sterilized by being passed through cotton and then through a strong solution of carbolic acid. During the next three months the fluid, which was slightly purulent from the first, was withdrawn twice more. The amounts removed were 1,400, 1,600, and 500 cubic centimetres. The patient gradually improved, his original pneumo-thorax did not return, and even his tuberculous symptoms disappeared, so that he was discharged cured. Two other cases were treated in a similar manner, one being cured and the other improved.

Professor Potain thinks that his results quite justify him in recommending this new procedure in appropriate cases. It allows one safely to remove a large amount of liquid from the pleural cavity, and thus obviate the danger of repeated evacuations and of producing congestion and rupture of the lungs from sudden expansion.

The prognosis of pneumo-thorax ordinarily is very bad. Among 46 cases of tuberculous origin collected by Professor West, of Heidelberg, 44 died and 2 were cured. Among 11 previous cases of this disease observed by Potain, 8 died and 3 were cured—*Medical Record*, May 26, 1888.

PECULIAR EFFECTS FROM A BELLADONNA PLASTER. DR. J. E. HORN reports, in the *Cincinnati Lancet-Clinic*, the following results from a belladonna plaster which was applied for the relief of the soreness resulting from a severe contusion: "It was on about thirty hours, and because of the burning it produced the patient removed it, and a vesicated spot the size of the plaster was visible. Two days later I was called in and given a good scolding. On looking at the arm I was actually frightened; the denuded surface was of a deep, angry red, and a scarlet hue extending from its edges in every direction. The arm was swollen all the skin would hold from shoulder to elbow, even extending to the fingers and hand, but not so great below the elbow. In fact, I had an extensive inflammation almost resembling erysipelas. The patient complained of dryness of the throat, and had double vision. The inflammation remained about one thing for three days, and then began to gradually subside. I have known belladonna plasters to irritate, but never saw anything like this, even when a vesicant had been applied."

COCAINE IN LITHOTRITY.—In a case in which an attempt to perform lithotrity proved futile on account of the extreme irritability of the bladder and the prostrate condition of the patient, Dr. Phélip injected into the bladder 16 grs. of cocaine dissolved in 12 fluid ozs. of water at a suitable temperature. After a few minutes, during which the patient was moved into different positions to insure the anæsthetic coming into contact with all parts of the wall of the bladder, it was found possible to proceed. The patient felt no pain whatever, and the surgeon was enabled to do his work quietly and completely. The anæsthetic condition of the bladder lasted about twenty minutes. The experiment, having proved so successful, was repeated on five subsequent occasions with the same happy result. It was noticed, however, that the effect produced by the last two injections was less marked and did not last as long as after the others. No untoward symptoms followed at any time, but it is recommended to adapt the dose of the drug to the degree of vesical irritation, and never to use the higher strength before trying the effect of a weaker one.—*British Medical Journal*, May 5, 1888.

INTRAVASCULAR INJECTIONS IN COLLAPSE.—DR. DIARKONOFF has made a number of experiments on ten healthy dogs with a view of testing the effect of an intravascular injection of common salt, to which a little alkali has been added, on a collapsed condition of the organism. In order to induce collapse, chloroform was administered, and when the animal had shown signs of being in a more or less dangerous condition a small quantity of Schwarz's solution (which consists of chloride of sodium 6 grams, caustic soda 0.05 gram, in 1000 grams of distilled water) was introduced into the distal end of the femoral artery, or into the proximal end of the femoral vein or the jugular vein. A remarkable effect was produced by these injections on the character of the pulse and on the blood pressure. In some cases in which the heart appeared to have stopped, contractions were by this means reinduced. The effect on the respiration was not so constant; still, this usually improved. Of course, when the chloroform was pushed beyond a certain point, saline injections and artificial respiration alike failed.—*Lancet*, April 21, 1888.

MALTED FOOD IN INFANTILE DIARRHŒA.—In the *Australian Medical Journal*, December, 1887, DR. CLENDINNEN writes that he has met with considerable success from the use of malt in the treatment of infantile diarrhœa. In a case in a child about three months old, there were passed very large lumps of casein, together with a quantity of green matter. The author ordered the child to be fed upon half a teaspoonful of Kepler's extract of malt added to a pint of milk. In forty-eight hours the lumps of casein, together with the green matter in the motions, had disappeared, the child slept well, and the diarrhœa ceased entirely. In several other cases this treatment was adopted with complete success. Three ways have been suggested for adapting the casein of cow's milk to the requirements of young children: (1) peptonization; (2) the addition of barley-water; (3) the use of malt.

ANTIHÆMORRHAGIC INJECTION.—MOUTARD-MARTIN advises the following:

Ergotine	2 grams.
Glycerine	15 "
Water	15 "

℥

Inject from 1 to 1.5 grams of this solution.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JUNE 2, 1888.

THE "GENIUS OF AMERICAN INSTITUTIONS."

In the telegraphed letter of a contemporary from the meeting of the Association in Cincinnati we read: "The amendment proposed by DR. N. S. DAVIS taking executive power from the Association was not acceptable, and is thought not to be in keeping with the character of American institutions" (*Medical News*). This paragraph is, in the first place, misleading, since the object of the amendment was not to take the executive power from the hands of the Association, but out of the *general sessions*; and the objection to the amendment that the Association has no desire to abandon the management of its own affairs, is no objection at all.

But this article is not for the purpose of discussing that amendment. What we wish to know is, what is meant by that stereotyped phrase, "The genius, or spirit, or character of American institutions?" After meeting the phrase a hundred times or more, in the daily papers, in medical journals, in political speeches, in pulpit orations, and in private conversation, without once getting even a vague idea of its meaning, especially when it is used in senses so apparently contradictory, one naturally becomes a little curious to know the proper usage and meaning of the term.

Is it an idiomatic expression, used when one has no other retreat from an argument or a proposition? The daily papers rail at propositions for further centralization of governmental power, at the medical laws and acts, at the creation of boards of health with police power, and at proposed laws for restraining or regulating the adulteration of foods (as do the manufacturers), and say that they "are contrary to the genius of American institutions." Medical journals conducted in the interest of some colleges not too far above the grade of diploma-mills, or by editors that have thread-bare professional consciences, launch anthemas at attempts at high medical education, and at medical organizations that will not admit irregular practitioners, as being "contrary to the spirit of American institutions." Some time ago a correspondent of a daily paper in this city spoke of the registration of midwives as being "subvertive of the spirit of American institutions." Another Chicago paper speaks of the refusal of reputable physicians to advertise in the lay press as "not in consonance with the character of American liberty and institutions." While, on the one hand, ministers and advocates of the Sunday observance laws have said that the keeping open of saloons on Sunday is "a strike at the character of American freedom and institutions," the saloon men, on the other hand, declare that these laws are "a blow at the very spirit of American institutions."

We have been led to believe that the idea and realization of representation of the whole by a chosen few is a distinctly American institution; and yet we are informed that a proposition for such representation is not acceptable because "it is not in keeping with the character of American institutions." What does the phrase mean? It is a secretion like that of the cuttle-fish, used to befog an argument from which there is no escape. Are we to believe that there is some "subtle, occult atmospheric condition" that gives tone, and color and character to every thing that originates between Cape Cod and Cape Blanco, and between the Lakes and the Gulf, and that makes the American institutions infinitely superior to any and all others? Is this true in scientific and political American medicine? Is the face "set as a flint" against all improvements and suggestions that have had birth in other lands one of our "American institutions?" "The cobbler, the mule-driver, and the hod-carrier may combine their forces and, if they are smart enough to obtain the influence of some politicians, get a charter for a medical college, and embark in the profitable business of selling diplomas, which duly registered in our court houses, will enable other cobblers, mule-drivers and hod-carriers to freely distribute, for good cash, the blessings of whatever medical knowledge they may have been able to scrape together." This may be called an "American institution." But, "let medical education alone," says one; "this is a free and democratic country; a man has a right to be educated as he chooses; to force him to be educated properly is contrary to the

spirit of American institutions." "Let the people take care of their own health," says another; "if a man chooses to have a cess-pool next to his well it is his own business, and other people have no right to interfere. Such interference is subversive of the spirit of American institutions."

Every fight that has been made in this country against a medical practice act, against a board of health, or against laws for the protection of the health of the people, in whatever way, or from whatever sources of danger, has been made on the ground that such acts or laws were unconstitutional, and "contrary to the genius of American institutions." All suggestions and attempts for regulating or restraining the manufacture of patent medicines have been met by the answer: "The manufacturers have the right to engage in that business if they wish; if people choose to poison themselves it is their own look-out. But to restrain or control such manufacture would be contrary to the spirit of American institutions."

After all, then, the phrase seems to amount to this: "I know of no argument against your proposition, but I will look wise and say: it is not in keeping with the character of American institutions. I myself do not know what those words mean, but they sound as if they were pregnant with unutterable wisdom, and I use them for the sound."

Haste without regard to accuracy seems to be a growing "American institution," if we may judge by the telegraphed reports of the meeting in Cincinnati. While those of the profession that do not attend the the meetings of the Association are anxious to know what is done at the meetings, they are not in such a tremor of haste and expectation that they cannot wait for an accurate report. No one can possibly object to an accurate report of the business meetings of the Association, but as the matter now is, it usually takes some months to correct the inaccuracies of one week's issue of some of our electric contemporaries. Inaccuracy is neither condoned nor corrected by telegraph wires, notwithstanding the marvelous therapeutic properties of electricity.

TOXIC EFFECTS OF ANTIFEBRIN.

A correspondent of Comanche, Texas, asks the following questions: "How many deaths have been reported from antifebrin? What has been the fatal dose? And what are the toxic symptoms besides depression, collapse, etc.?" These questions were prompted by the death of a young lady recently, which was attributed to antifebrin, of which she had been in the habit of taking 10-gr. doses for paroxysms of headache. The symptoms in this case as given by our correspondent were "coma; contraction of the pupils; breathing slow, spasmodic and stertorous; cyanosis; slow and feeble pulse; collapse and death nine hours after the supposed ingestion of the drug." It is further stated that the deceased "was known to have purchased a 2-oz. bottle of tinct. opii a few days before her death, which was never found," and was also a victim of melancholia.

The only case we recollect seeing reported as a death directly from antifebrin was by von Quand, as briefly alluded to in the chapter on Antipyretics in the "Annual of Universal Medical Sciences," just published. In this case it is simply stated that the child, age not given, took 4 grs. of the antifebrin every two hours all day, at the end of which time it was found in complete collapse, strongly cyanotic, and soon died.

The fatal dose for an adult has not been ascertained. From 1 to 2 grams (grs. xv to xxx) in 24 hours, have been repeatedly given in febrile and neuralgic affections without toxic effects. When given in larger quantities it has induced cyanosis, increased frequency of respiration, feebleness of pulse, natural or dilated pupils, and marked indications of collapse. Those who have experimented with the drug represent its toxic effects to be similar to those of aniline, from which it is derived. The symptoms of the case mentioned by our correspondent certainly much more perfectly resemble those produced by toxæmic doses of opium than any hitherto observed from the use of antifebrin.

UNIVERSITY OF MINNESOTA.

The Board of Regents of the University of Minnesota has established a Medical Department in connection with the University. The department is located at Minneapolis. It is to be a high-grade school, embracing the main features of the Medical Department of the Northwestern University, Harvard, the University of Michigan, and the University of Pennsylvania. This action of the Board does not increase the number of schools in Minnesota but, upon the contrary, reduces the number. The Minnesota Hospital College and the St. Paul Medical College have ceased to exist, and a portion of the Faculty of each school are elected to positions in the new school. This action on the part of the Board is largely in response to the wishes of the profession of the State for a high-grade school in connection with the University, with a Faculty in sympathy with higher medical education, and working in harmony

with the new Medical Practice Act. The Board of Regents very properly appointed a committee consisting of the President of the State Medical Society, the President of the State Board of Health, the President of the State Board of Medical Examiners, the President of the University, the Dean of the Medical Department, to nominate a Faculty for the new department. The instructions of the committee were to secure the best men at their command. Professor C. J. Bell, of the Johns Hopkins University, is the only Eastern man in the Faculty. He is elected to the Professorship of Chemistry. The University of Minnesota is very amply endowed in lands and by the State, and by maintaining a high curriculum for its medical department, it will undoubtedly enlist the good wishes and support of the profession of the Northwest.

MULTIPLE INCISIONS FOR INDOLENT ULCERS.—Harbordt's method of treating indolent ulcers, which has been in use in the St. Spiritus Hospital in Frankfort-on-the-Main for some years, is thus described by DR. F. SPÄTH, in *Centralbl. für Chirurgie*, No. 14: The whole ulcer is divided lengthwise by a deep incision extending a considerable distance into the healthy tissue, after which cross incisions are made through the callous tissue into the healthy tissue at intervals of about 1.8 cm. The incisions should extend through the skin and the subjacent fascia, so that the wounds will gape widely. Hæmorrhage, which is sometimes profuse, is controlled by tampons, and the whole wound is dressed with iodoform dressings. The dressing is removed in from 8 to 14 days. when healthy granulations will be seen springing from the incisions; they soon cover the whole surface, to the level of the surrounding skin, from which there is a rapid growth of new epidermis. It is at this stage, when there has been great loss of skin, that transplantation may be effected and will be useful. The incisions are made after necrotic fragments are removed, and when the ulcer is no longer foul.

REFLEX INHIBITORY POWER OF COCAINE.—MR. E. HURRY FENWICK reports four cases in the *Lancet*, of May 5, which show that cocaine is possessed of considerable reflex inhibitory power. A series of experiments on decapitated frogs showed that when a 20 per cent. solution was thrown into the cloaca so as to inject the bladder and rectum, reflex excitability was so far diminished that the foot would be retained in a .2 per cent. of sulphuric acid for 20, 30, 60, or even more seconds, while usually the time is about .008 to .015 seconds. In a very painful case of myalgic wry-neck a 20 per cent. solution (gtt. 30) thrown into the urethra caused a diminution of the cramp and stiffness in 40 seconds, and in 60 seconds complete relief, which lasted for some hours. Mr. Fenwick reports also a case of facial neuralgia and flying pains, and one of burning pain in the glans penis and legs relieved by cocaine thus applied. Such applications have, however, no power over strong stimuli, corresponding to the pain of carcinoma, inflammation, etc.

PHENACETIN IN PYREXIA.—MR. H. OSBORNE GRENFELL calls attention, in the *Practitioner*, May, 1888, to the use of phenacetin—para-acetphenitidin, the ethylic ether of paramidophenol—in the treatment of pyrexia. This drug is a slightly reddish, inodorous and tasteless powder, but slightly soluble in water, more so in glycerine, and readily soluble in hot alcohol. It is insoluble in alkalies and acids (except glacial acetic acid. It is most conveniently administered in capsules. The cases, with charts, reported by Mr. Grenfell, show that phenacetidin is an undoubted antipyretic. In cases of pyrexia the action of the drug is seen within half an hour after administration. The patient generally perspires freely, and feels drowsy, often falling asleep. The best dose for an adult seems to be about eight grains. Children bear the drug well. It is also a satisfactory analgesic in neuralgia.

EDITORIAL NOTES.

THE STATE MEDICAL SOCIETY OF WISCONSIN will hold its forty-second annual meeting in the Court House, Milwaukee, convening at 8 o'clock P.M. of Tuesday, June 5, 1888, with a full and interesting programme of work before it. L. G. Armstrong. M.D., Boscobel, President; J. T. Reeves, M.D., Appleton, Secretary.

THE OHIO STATE MEDICAL SOCIETY will hold its forty-third annual meeting at Columbus, O., June 13, 14 and 15, 1888. The programme gives promise of an interesting and profitable meeting. President, Samuel F. Forbes, Toledo; and Secretary, G. A. Collamore, Toledo, O.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION will hold its next annual meeting at St. Louis, commencing September 11, 1888, and continue three days.

We regret to learn of the illness, from perityphlitis, of DR. FRANK P. FOSTER, editor of the *New York Medical Journal.*

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

THIRTY-NINTH ANNUAL MEETING.

The Thirty-Ninth Annual Meeting assembled at Central Music Hall, Cincinnati, O., May 8, 1888.

DR. W. W. DAWSON, Chairman of Committee of Arrangements, called the Association to order and introduced Rev. R. A. Gibson, who offered a prayer.

The President, Dr. A. Y. P. GARNETT, of D. C., took the chair, supported by the Vice-Presidents, Drs. Duncan Eve, Tenn.; D. Colvin, N. Y.; C. J. O'Hagan, N. C.; and A. Stedman, Col. The Permanent Secretary, Dr. Wm. B. Atkinson, Pa., and the Assistant Secretary, Dr. Jos. Ransohoff, were at their posts. The Treasurer, Dr. R. J. Dunglison, Pa., and the Librarian, Dr. C. H. A. Kleinschmidt, were present. Ex-Presidents Drs. L. A. Sayre, N. Y., N. S. Davis, Ill., T. G. Richardson, La., and Jos. M. Toner, D. C., occupied seats on the platform.

HON. AMOR SMITH, Mayor of Cincinnati, made an

ADDRESS OF WELCOME

on behalf of the citizens.

DR. C. G. COMEGYS then delivered the following

ADDRESS OF WELCOME

on the part of the profession:

On the part of the medical profession of this city I am happy to welcome you to Cincinnati, and to assure you that we, with all of the citizens, feel greatly honored that you have selected this, the most central city of the Nation, for this annual congress. Twice before, to-wit: in 1850 and in 1867, the Association has held its annual councils here, and your professional brethren and the people cordially united to make those occasions encouraging and profitable. It is sad to feel that a majority of those who then assembled, and of those who greeted you, have passed away; but it is evident from the numbers, the freshness and manly vigor seen on every side, that the genius and spirit still live—yea, are augmented and fully competent to carry forward the great purposes of your predecessors.

These large assemblies of medical men, in increasing numbers every year, prove indubitably that the value of the Association is no longer a question. To say nothing of the scientific discussions involved, it is clear that the associations of the Association give immense satisfaction to all. It is, certainly, a great pleasure for men, who are engaged in common duties and modes of life in widely separated areas, to be thus brought together for the establishment of acquaintanceships that promote community of action for a higher performance of their beneficent work among the people. It is a wonderful sight to behold so large a body of cultured men who are striving, always and everywhere, to enlarge public happiness by investigations for the prevention of those causes and agencies that undermine the public health and welfare; when, if complete success should crown their lofty aims, the remunerative part of their labors would be about extinguished, yet, in all ages (and never as much so as now) the medical profession is unceasing in its labors to trace devastating epidemics to their lair; to avert the processions of infectious diseases; to isolate those who are suffering therewith; to disinfect localities; to point out the most healthful modes of living—in regard to light and air; the purity and abundance of water supply; the evils of adulterated food; the overtasking of labor; the prevention of ill-assorted and consanguineous marriages; the abuses of the brain, and the suppression of those two giant evils of civilization—intemperance and prostitution.

This period of your assembly is one of extraordinary interest to our people, for this is the centennial year of the settlement of Cincinnati, and you can see by the vast structures in Washington Park and in the rear of this building the extraordinary preparations for its magnificent celebration. It is an heroic age and a glorious race which we wish to commemorate. We wish to crown their deeds with praise and their memory with gratitude, to recount their hardihood, labor, self-denial, and piety, and to remind their descendants, who occupy the fields of their conquest, of their sublime patriotism, and to excite them to emulate their courage, their toil and their public virtue.

Allow me then, briefly, to dwell on that period—more especially on the character of a medical mind that pervaded that time as one of those "immortal men who live again in lives made better by his presence."

One hundred years ago a small body of adventurous men, with their families, descended the beautiful Ohio and landed their rudely constructed barges on the shore. The State of Virginia, with great nobleness of soul, had ceded the vast Northwestern Territory to the General Government, and Congress had enacted that it should be a land of unqualified freedom. The richness of the soil and the cheapness of the lands led citizens of the East to seek new homes in western wilds. The colony that landed here was not large; their whole possessions occupied but a small number of flat boats or barges. It seemed to be a stupendous undertaking thus to plant themselves in the primeval forest on this wild coast, with no means of immediate sustentation but the stores in their barges and what they might hunt in the wilderness. There were no grounds open for any culture and the forest was roamed by wild beasts and more savage and hostile men.

But this forlorn hope of civilization were men of no common mold. They brought with them courage, culture, and integrity, and were full of the high aims of the Eastern people who had just fought for their independence and secured the vast British posses sions south of the Canada line. They were imbued with the loftiest motives that can animate the soul, and fearing nothing but God, they confronted the wilderness and its warlike denizens with that dauntless courage which renders individuals and communities, when their cause is just, unconquerable.

They constructed their cabins and block houses,

organized a military band, established a school, and built a rude church. Then they passed a long and severe winter, but in the spring new colonists arrived, possessed of various trades and implements for a better construction of tenements and the development of crops of grains and fruits. So they gradually multiplied, felled the forest, opened fields, and the hamlet gradually became a village, and that expanded to a town. Meanwhile a strong military post was established, a Territorial Governor came out, a county was organized, a seat of justice created, and the foundations of a State were displayed. But their condition of peace and hope was soon blasted. The terrible defeat and massacre of the army of St. Clair, in 1791, struck terror to the settlers. The savages were more belligerent and daring than ever before, and general consternation prevailed.

The Eastern people became aroused to the necessity of protecting the pioneers. President Washington commissioned General Wayne to form a new army to conquer a peace. He arrived with all the troops he could gather in the summer of 1793, and camped on the western side of this city.

The losses of the western settlements had been so large by the defeat of St. Clair that the forces of General Wayne were insufficient for the proposed campaign. Delay followed delay, but at last the reinforcements came. The settlers south of the Ohio at length freely offered themselves for the war.

Nearly a century has passed, but the descendants of the pioneers shall never cease to commemorate the joyful time, when, with bugle notes and flying banners, 2000 mounted riflemen from Kentucky, led by Governor Shelby, crossed the Ohio and joined the camp of Wayne. This was a sure presage of the victory which he gained, and which broke the savage power forever. Wayne's success brought peace to the Ohio valley; all terror of the savages subsided, and an immense immigration from the East and South set in. Cincinnati felt the influx: commerce and manufacture began to flourish, and great public spirit emerged, so that in a few years she became the most busy and progressive town of the frontiers. But the town was without any institutions of higher learning. There was no lack of cultivated people; indeed, in the pulpit and at the bar, and in medicine, there were men possessed of acknowledged ability and collegiate training, and several of them had a national reputation, but there was no master mind who, as a leader, could bring into combined action all the needs and desires of a growing and refined community for the establishment of institutions for instruction in higher learning.

In the meanwhile, however, there was growing to manhood, in the wilds of Kentucky, one whose soul had caught the spirit of the times, and who, at length, came to Cincinnati with the largest desires to take his part in her future welfare. He had been nurtured amid all the deprivations, hardships and perils of the wilderness, and his faculties had been precociously developed by all those struggles with dense forests, ferocious beasts and savage men that the pioneers must encounter and subdue. His young life was passed in the wild solitudes of the forests, and his soul loved nature. From his earliest consciousness he had drunk in all her wild and beautiful forms, and it had kindled his natural powers of observation with the fervor of deepest passion. Such a mind, so full of enthusiasm for knowledge in Nature's arcana, coull not remain in the dull, routine life of the planter. It was happily directed towards medicine, and Daniel Drake came to this city in the first year of the century and apprenticed himself to Dr. Goforth as his office student and apothecary. His opportunity for formal instruction in books had been very limited, but this lack of opportunity was greatly compensated by his habits—so thoroughly acquired—of observation, comparison, and meditation. After a patient and methodic service of six years, in which he had made himself familiar with the text-book, he felt that he must go to the famous school of the East where Rush, Physic and Wistar taught. With scanty means he completed his long journey on horseback and gratified the wish of his heart.

On his return, with enlarged views of culture, he entered busily into practice and rose rapidly in the public estimation. Besides medicine, he investigated at large subjects in natural history and physics, also studies of the aborigines and the monuments that marked their residence in our valleys. He wrote also descriptions of the rising City, the Miami valleys and their prospective wealth. These writings, particularly the scientific ones, attracted wide attention, so that when at a later period he returned to Philadelphia to attain his degree he was received by the faculty of the University and the distinguished society of Philadelphia as a savant.

To the south of us then, in Kentucky, lay another flourishing frontier town of nearly equal population with Cincinnati. It was not only distinguished for the heroic patriotism of its people, but also for their high social culture and the organization of the Transylvania University. Lexington first held aloft the torch of science in this wild world, and was recognized as the Athens of the West. There, under the auspices of B. W. Dudley, in 1817, the first medical school in the West was organized, and Drake was elected one of the professors. Dudley and Drake were of the same age, and both Kentuckians. They first met as students in Philadelphia. Dudley graduated in that year—1806—and four years later went to France, joined the French army as junior surgeon and served on Lavey's staff in many battles, ending, I believe, at Waterloo. Drake returned home to gain the means to go back to the University and obtain his degree, which he accomplished in 1816.

Thus these two great and ardent minds were again united, and with their associates, Caldwell and Richardson, soon developed a flourishing medical department in the University. But neither Drake's residence and happy associations in Philadelphia, nor his success as a teacher in Lexington, could divert his thoughts and hopes from his beloved Cincinnati; indeed, it only kindled within him an inappeasable zeal to return to devote his life to the erection of great schools in the arts and sciences. So he resigned, after delivering two courses of lectures, and

consecrated himself to his great purpose. He spared nothing to accomplish it. He spent a winter at the State capital and secured charters for the Cincinnati College, the Medical College of Ohio, and the Cincinnati Hospital as a place for the demonstration of clinical and pathological medicine. His ambition was not only to be successful as a practitioner and teacher, but an active-minded, useful citizen as well; and he gave much thought to all propositions that would promote the general welfare. He soon comprehended that the traffic and commerce connected with the river were inadequate to the building of the great city of his prophecy. He saw, the first, I believe, the utility and practicability of a canal to connect the river with Lake Erie, and at a later period, when railroads attracted attention, the immense importance of connecting the city with the great South by a railroad to Charleston, and he earnestly pressed his projects by his writings and public addresses. Both of these great schemes of internal commerce are now in operation and have proved of value to the city. Nothing seemed to escape him for the adornment of the city and the comfort of the people. The line of elm trees on the south side of Washington Park were planted under his own direction over sixty years ago.

He was a voluminous writer on professional and general topics, but the work with which he crowned his life's labor was his "Systematic Treatise of the Diseases of the Interior Valley of North America," to which he devoted more than twenty years of travel throughout the vast Mississippi Valley. It was, so to speak, "dug out of the very elements of the continent and society of America." It is a great work of absolutely original research in medical topography, and will always remain a monument to his fame that has no parallel in the science and literature of medicine.

Though Drake has long been dead, yet all of his great undertakings remain and are flourishing. The Cincinnati College is the large Law school of the Ohio Valley; the Medical College of Ohio, now a Medical Department of the University of Cincinnati, was never so prosperous; the Clinical and Pathological School of the Hospital is attended by 400 students. It has a large and growing library and museum, and is now undertaking to establish a pathological laboratory for original research. The beautiful elm trees are now as verdant as ever.

The wonderful activity of Drake's mind, which led him to undertake the most severe professional labors and throw himself besides into every struggle for the advancement of the interests of society, is readily explained when we consider the philosophic spirit which animated his mind; for he was possessed of that gift of genius which sees beyond all the apparent disparity of phenomena; that severe unity, after which all true philosophy is continually aspiring.

To him the universe was not a summation of material phenomena conveying sensuous impressions merely, but a revelation. His was a reverent and devout soul. He felt like von Barden, who declares that "he who seeks in nature, nature only, and not reason; he who seeks in reason, reason only, and not God; he who seeks God out of and apart from reason, or reason out of and apart from God, will find neither nature, nor reason, nor God, but will assuredly lose them all."

All the institutions he planted exhibit his great powers of mind and will always preserve his memory fresh and venerated in the great Western Valley. In the medical firmament bending over the world, reaching from the past and stretching indefinitely away amidst all the glittering galaxy and burning orbs that represent the immortal dead, the orb of Drake will shine as a star of light forevermore.

In Cincinnati his great example and precepts have continued to affect its medical life. I think it my duty to say to the members of the American Medical Association that a spirit of original research has been carried forward here, and in a period of forty years of professional life in this city I have never known so many young men of thorough training in our own schools, and supplemented by severe study in the clinical and pathological schools of Great Britain and the Continent, as are now among our active practitioners.

A few last words about our city at large: We hope that you will take a general view of its topographical situation. It is very peculiar and striking. If you will ascend our hills you will find that they are built of those stratified sedimentary masses that belong to the lower silurian epoch. Between all these layers quantities of marine shells are found that prove that they formed the bottom of a great salt sea.

Vice-President Dr. Duncan Eve, of Tenn., presided while THE PRESIDENT delivered the *Annual Address*. (See p. 573, THE JOURNAL May 12.) On motion, the Address was referred to the Editor of THE JOURNAL for publication, with the thanks of the Association.

Dr. N. S. Davis: As some of the Sections have more papers than can be disposed of in the afternoon hours, they ask permission of the Association to meet for Section work at 11 o'clock in the morning, so that they may have a morning as well as an afternoon session; therefore

Resolved, That the Sections may meet for scientific work at 11 A.M. as well as at 3 P.M.

The resolution was adopted.

Dr. Davis asked the Judicial Council to meet at the Burnet House at 9 A.M. on Wednesday. The Permanent Secretary read invitations from the College of Music of Cincinnati, from the Cincinnati Chamber of Commerce, from the Technical School of Cincinnati and from the Centennial Exposition Association, which were received with the thanks of the Association. On motion, the Association adjourned to meet at 10 A.M. on Wednesday.

WEDNESDAY, MAY 9— SECOND DAY.

THE PRESIDENT called the Association to order at 10 A.M. The Secretary announced the following Committee on Nominations:

Ark., P. O. Hooper; Cal., H. S. Orme; Conn., W. C. Wile; Dak., J. D. McConnell; D. C., D. W. C.

Patterson; Ga., R. Battey; Ill., C. Gilman Smith; Ind., T. B. Harvey; Ia., R. W. Llewellyn; Kan., J. E. Minney; Ky., D. S. Reynolds; La., T. G. Richardson; Me., A. Garcelon; Md., J. J. Chisolm; Mass., C. J. Belt; Mich., W. Brodie; Mo., T. J. Lutz; Minn., Alex. J. Stone; Neb., R. C. Moore; N. J., I. N. Quimby; N. Y., L. D. Bulkley; Ohio, Thad. A. Reamy; Pa., A. M. Pollock; S. C., J. Evans; Tenn., T. K. Powell; Tex., E. J. Bell; Vt., D. P. Allen; Va., J. W. Chancellor; Wis., J. T. Reeve; U. S. N., W. T. Hord; U. S. Marine Hosp., John B. Hamilton.

Dr. Roberts Bartholow, of Pa., read the

ADDRESS IN MEDICINE.

(See p. 669.) On motion it was referred for publication.

Dr. J. H. Hollister, of Ill., Secretary of the Board of Trustees, read the

ANNUAL REPORT OF THE TRUSTEES OF THE JOURNAL.

as follows:

The Trustees for the publication of The Journal of the American Medical Association respectfully submit the following as their annual report:

The Journal has been issued upon the day named for publication, each week of the current year.

The number of copies required for the supply of the members of the Association and for subscribers weekly was 4,572. To provide for exchanges, and for the completion of files, as members may desire, the weekly issue was placed at 5,000 copies. The editorial management, as formerly, is committed to Prof. N. S. Davis as editor in chief. It has its own office of publication at Chicago, and the cash value of its type, fixtures, etc., belonging to The Journal printing-office, amounts to $1,054.19, which is free of incumbrance and properly insured.

The receipts of The Journal for the year have been as follows:

It should be said in explanation that all membership dues are paid to the Treasurer of the Association, leaving only the money paid for subscriptions, advertisements, reprints and extra Journals to be received at the office of publication. From the sources just named there have been received at this office during the year ending March 31, 1888, the sum of $11,897.98; of which $2,452.25 was from subscribers; $8,548.48 from advertisers; $753.75 for reprints; and $143.50 rent for part of printing-office. These figures show an aggregate increase of income from the sources named of $4,317.35 over the receipts from the same sources the preceding year.

The disbursements on account of The Journal have been as follows:

The total publication expenses of The Journal during the year ending March 31, 1888, was $16,261.47; being an increase of expenditure in this department of $3,099.46 over that of the preceding year. This increase of expenditure has been caused by the addition of four pages of reading matter to The Journal, from four to six pages of advertising, 200 copies to the regular weekly issue, the printing of the triennial list of permanent members of the Association, and the issue of 20,000 extra copies and their distribution as sample copies. The aggregate cost of these several items fully equals the increase in expenses; and yet, as shown in the preceding paragraph, the increased receipts through the publication office alone have exceeded the increased expenses by $1,217.89.

It will thus be seen that The Journal is not only self-sustaining, but actually a source of revenue to the Association.

The Trustees are unanimous in the opinion that the increased receipts should be wisely expended in the improvement of The Journal. As the type in use is becoming somewhat worn, they have decided that the next volume shall appear in a new dress and with a better quality of paper. They have authorized, beside this, a sum not to exceed $400, to be expended in meeting legitimate needs, at the office of publication.

It is also the purpose of the management, so far as means will permit, to enlarge the *editorial corps* and render The Journal of constantly increasing value to our members and subscribers.

We believe that the best interests of The Journal require that we make the following request, namely:

That the Association shall place at the command of the editor in chief the exchanges of The Journal *for reference*, and that the books and monograms for review and editorial notice be also placed at his disposal to be used by him in such manner as in his judgment the interests of The Journal may require.

In conclusion the Trustees desire to express their sincere thanks for the confidence which the Association has been pleased to repose in them, and they beg to assure *you* that, so far as their individual and united effort may avail, they will earnestly endeavor to command the continuance of that confidence and to fulfil as best they may the trust committed to their hands. Very respectfully,

J. M. Toner, President, D. C.; E. M. Moore, N. Y.; Leartus Connor, Mich.; A. Garcelon, Me.: P. O. Hooper, Ark.; L. S. McMurtry, Ky.; E. O. Shakespeare, Pa.; Wm. T. Briggs, Tenn.; and J. H. Hollister, Secretary, Ill.

On motion of Dr. W. H. Daly, Pa., it was received, and its recommendations were adopted.

Dr. E. A. Wood, of Pa., Chairman, read the report of the *Committee on Dietetics*.

Dr. F. Woodbury, of Pa., presented certain views as an exposition of how the work on Dietetics should be done.

On motion of Dr. L. A. Sayre, N. Y., amended by Dr. Benj. Lee, Pa., and accepted by Dr. Sayre, it was

Resolved, That the Committee on Dietetics be continued, and that it be and is hereby instructed to present a report at the next meeting of this Association embodying the general principles to be observed in a rational system of dietetics; that the Committee have power to enlarge its membership, and that the Committee of Arrangements is hereby authorized to give its work a proper place on the programme of the next meeting.

Dr. N. S. Davis, Ill., brought up the amendments to the Constitution offered at the last session.

Vice-President Dr. Duncan Eve, Tenn., presided.

The amendment relative to members by application was read, and on motion was unanimously adopted as follows:

Members by Application shall consist of such members of the State, County and District Medical Societies entitled to representation in this Association, as shall make application in writing to the Treasurer, and accompany said application with a certificate of good standing signed by the President and Secretary of the society of which they are members, and the amount of the annual membership fee, $5. They shall have their names upon the roll and have all the rights and privileges accorded to *Permanent Members*, and shall retain their membership upon the same terms.

The amendment regarding the Board of Trustees was presented and unanimously adopted, as follows:

The *Board of Trustees* shall consist of nine members, three of whom shall be elected annually on the nomination of the standing General Committee, and shall serve for three years. It shall be the duty of this Board to provide for and superintend the publication and distribution of all such proceedings, transactions, and memoirs of the Association as may be ordered to be published, and in such a manner as the Association may direct; and in doing this, it shall have authority to appoint an editor and such assistants, and determine their salaries, and procure and control such materials as may be necessary for the accomplishment of the work assigned to it. To further facilitate its work it shall be the duty of the Secretaries of the Association and of the several Sections, during each annual meeting, or as soon thereafter as practicable, to deliver to the Board, or such editor or agent as it shall appoint, all such records of proceedings, reports, addresses, papers, and other documents as may have been ordered for publication, either in the general sessions or in the Sections. All moneys received by the Board of Trustees or its agents, resulting from the discharge of the duties assigned them, must be paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the President of the Board of Trustees. It shall be the further duty of the said Board of Trustees to hold the official bond of the Treasurer for the faithful execution of his office; to annually audit and authenticate his accounts, and present a statement of the same in its annual report to the Association; which report shall also specify the character and cost of all the publications for the Association during the year, the number of copies still on hand, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary.

The third amendment, relative to the superseding of the Nominating Committee was read.

Dr. J. M. Keller, of Ark., moved to amend that each State should select.

On motion, of Dr. Daly, this was laid upon the table.

After some further discussion, on motion of Dr. H. A. Johnson, of Ill., it was agreed to print the amendment and make it the special order for Thursday, at 12 M.

On motion, adjourned to meet on Thursday at 10 A.M.

THURSDAY, MAY 10—THIRD DAY.

THE PRESIDENT called the Association to order at 10 A.M.

The Permanent Secretary read the following:

RESOLUTIONS ADOPTED BY THE STATE MEDICAL SOCIETY OF ARKANSAS AT THE THIRTEENTH ANNUAL SESSION, APRIL 27, 1888, AND ORDERED TO BE TRANSMITTED BY THE SECRETARY TO THE AMERICAN MEDICAL ASSOCIATION.

Resolved, That the members of the State Medical Society of Arkansas have for years observed with pain and mortification the patronage given to charlatanism in all its multifarious aspects by the religious press of our country.

Resolved, further and more specifically, that the appearance in religious papers, ostensibly published for the inculcation of truth and morality, of serious homilies on prayer and praise side by side with cures for consumption, cancer, Bright's disease and other incurable ailments, to which an editorial endorsement is often given, as well as secret preparations under the cloak of remedies for diseases, but really intended for purposes of fœticide and other immoral uses, largely tend to shake the confidence of the profession of medicine in the integrity and purposes of the managers and editors of such journals.

Resolved, further, that it has been the well-known custom of the profession to render services gratuitously to clergymen, which we do not regret nor do we propose to recall, and yet we must assert that the frequent occurrence of endorsements and recommendations of the clergy of our country of peripatetic doctors and advertising charlatans has in many instances been the only reward of our gratuitous services.

Resolved, further, that we are aware that the editors of religious newspapers admit the painful situation in which these advertisements place them, and attempt to excuse themselves by saying that it is necessary to take these advertisements in order to obtain means to conduct the papers; but, in the language of orthodox theology, we would say, "Put behind you that damnable doctrine that we must do evil that good may come."

Resolved, further, that as a Society we declare that the continued perpetration of the above offenses by some of the clergy and religious press of the country brings harm to the bodies of their constituency, and damages materially their influence upon the thinking class of the medical profession.

On motion of Dr. W. T. Akins, of Ill., the resolutions as read were fully endorsed as the sense of this Association.

The Permanent Secretary read an invitation from the Philadelphia County Medical Society for the Association to hold its next meeting in that city.

Dr. P. O. Hooper, Chairman, read the

REPORT OF THE NOMINATING COMMITTEE.

To the President and Members of the American Medical Association:—Your Committee on Nominations have the honor to report that they yesterday met and organized by the selection of Dr. P. O. Hooper, of Arkansas, as Chairman, and Dr. John B. Hamilton, of the Marine Hospital Service, as Secretary. After mature deliberation they, by ballot, proceeded to the nomination of the following officers for the ensuing year.

For President—W. W. Dawson, of Ohio.

For First Vice-President—W. L. Schenck, of Kansas.

For Second Vice-President—Frank Woodbury, of Penn.

For Third Vice-President—H. O. Walker, of Mich.

For Fourth Vice-President—J. W. Bailey, of Ga.

For Treasurer—Richard J. Dunglison, of Penn.

For Permanent Secretary—Wm. B. Atkinson, of Penn.

For Librarian—C. H. A. Kleinschmidt, of D. C.

For Chairman Committee of Arrangements—H. R. Storer, of Newport, R. I.

The following were elected Trustees to fill the vacancy caused by the expiration of their respective terms of office: E. M. Moore, of N. Y., John H. Hollister, of Ill., and Joseph M. Toner, of D. C.

To fill a vacancy in the Judicial Council caused by the death of Dr. Stormont, of Kansas, W. A. Phillips, of Kansas.

To fill vacancies in the Judicial Council caused by expiration of term of office: A. M. Pollock, of Penn., W. C. Van Bibber, of Md., J. F. Hibberd, of Ind., Chas. S. Wood, of N. Y., J. McF. Gaston, of Ga., W. H. O. Taylor, of N. Y., George L. Porter, of Conn.

To deliver the address on *General Medicine*—William Pepper, of Penn.

To deliver the address on *General Surgery*—P. S. Connor, of Ohio.

To deliver the address in *Slate Medicine*—W. H. Welch, of Md.

For Members of the Committee on State Medicine—Ala., Jerome Cochran, Ark., Jas. A. Dibrell, Jr., Cal., G. G. Tyrrell, Col., Chas. Denison, Conn., W. C. Wile, Dak., F. P. Kenyon, D. C., J. F. Hartigan, Del., L. P. Bush, Fla., J. Y. Porter, Ga., J. P. Logan, Ill., J. H. Rauch, Ind., L. D. Waterman, Ia., J. F. Kennedy, Kan., W. E. Oldham, Ky., J. N. McCormack, La., S. E. Chaillé, Me., T. J. Foster, Md., T. A. Ashby, Mass., H. P. Walcott, Mich., Henry B. Baker, Miss., Wirt Johnson, Mo., L. D. Matthews, Minn., Perry H. Millard, N. C., Thos. F. Wood, Neb., W. M. Knapp, N. J., I. N. Quimby, N. Y., T. M. Flandreau, N. H., G. P. Conn, Ohio, Byron Stanton, Ore., W. D. Baker, Penn., Benj. Lee, R. I., H. R. Storer, S. C., H. T. Horlbeck, Tenn., J. Berrien Lindsley, Vt., J. H. Hamilton, W. Va., G. W. Baird, Va., Dr. Ashton, Wis., J. T. Reeve, U. S. Navy, Surgeon Wolverton, U. S. Army, F. C. Ainsworth, U. S. Marine Hospital Service, J. A. Kinyoun.

The following were named as the Committee on Necrology: Ala., G. E. Ketchum, Ark., L. P. Gibson, Cal., R. H. Plummer, Dak., F. M. Crain, D. C., J. M. Toner, Fla., Neal Mitchell, Ga., P. R. Courtleroy, Ill., D. W. Graham, Indiana, J. F. Beard, Ia., J. F. Priestly, Kan., Robert Aikman, Ky., H. M. Skillman, La., J. R. Matas, Me., A. J. Fuller, Md., John Morris, Mass., G. M. Garland, Mich., G. E. Ramsey, Miss., Dr. Trimble, Mo., A. H. Meisenbach, Minn., W. W. Mayo, N. C., K. P. Battle, Neb., Dr. Galbreth, N. J., W. P. Watson, N. Y., W. W. Potter, N. H., Dr. Whiting, Ohio, A. H. Brundage, Ore., Dr. Shackleford, Tenn., J. B. Murphy, Vt., A. L. Finley, Va., M. L. James, Wis., Dr. Mackie, U. S. Navy, W. T. Hord, U. S. Marine Hospital Service, P. H. Bailhache.

Your Committee also selected of their number the following as a sub-committee to appoint alternates in case any gentleman named to deliver a general address shall decline to serve, viz.: John B. Hamilton, Wm. Brodie and A. Garcelon.

Your Committee name as the next place of meeting, Newport, R. I., and the time of meeting as the first Tuesday in June, 1889.

P. O. HOOPER, *Pres't.*

JOHN B. HAMILTON, *Sec'y.*

On motion of Dr. J. F. Hibberd, Ind., the report was received and the nominations were confirmed.

Vice-President Dr. Duncan Eve was called to the chair.

DR. E. M. Moore, N. Y., read the Address on Surgery. On motion, a vote of thanks was extended to Dr. Moore for his able paper, and it was referred for publication (See JOURNAL of May 19).

The Permanent Secretary read the

REPORT OF THE RUSH MONUMENT COMMITTEE,

A. L. Gihon, Chairman; also, report of Dr. Toner, Treasurer of the same.

REPORT OF THE RUSH MONUMENT COMMITTEE.

As Chairman of the Committee appointed to provide for the erection of a monument to Benjamin Rush at the capital of the United States, I beg to report progress, albeit that progress is exceedingly slow and unsatisfactory. Your Committee might be wholly discouraged but for the fact that nowhere has there been met anything but approval and commendation of the proposed monument. So uniform has been this sentiment that it cannot be doubted that, among the more than 100,000 physicians and students in the United States, a sufficient number will be found to contribute a dollar each to erect such a statue at the National capital as shall be creditable to the medical profession, an appropriate testimonial of this great patriot-physician, and a conspicuous ornament among the many beautiful works of art which adorn the city of Washington. I have never met a person opposed to this project, and have only heard of one, whom I regret not having seen, for he must be the one without compare in our profession, who did protest against giving a dollar towards erecting a statue to a man *"who had founded a medical college at Chicago and had not left money enough to put a monument over his own grave."*

The chief problem your Committee has had presented to it and has not yet satisfactorily solved, is how to collect these subscriptions from persons who, while quite willing to hand a dollar to any one ready to receive it, forget, or neglect, or do not care to take

the trouble to obtain a mailable dollar and send it to any appointed address. Similar forgetfulness, neglect and indisposition are true of individual members of the Committee, who, under its original constitution, were charged with the collection of subscriptions from the residents of the entire State or Territory which they represented. The labor and expense of attempting to communicate by correspondence with 100,000 individuals scattered over all this country are so great, that it is hoped the members of the medical profession, on reading this statement, will at once inclose their subscriptions to the Treasurer of the Monument Fund, Dr. Joseph M. Toner, at 615 Louisiana Avenue, Washington, D. C., and that every physician so doing will further personally interest himself, and herself, in obtaining a similar subscription from each friend and acquaintance in the ranks of the profession in his or her immediate neighborhood.

Apart from individual effort, the chief dependence of your Committee must be on the zealous coöperation of the medical societies, medical colleges, and other medical institutions, and more than all in that of the medical press of the country. The State Medical Society of California, at its annual meeting at San Francisco on April 18, gave an earnest of the possibilities of State work. True to their promise of the previous year, every member of the Society, during a recess taken for the purpose, handed a dollar subscription to Dr. Tyrrell, the member of the Committee for California, who was thus able to transmit to the Treasurer $106, the amount subscribed being the exact equivalent of the number of members in attendance. This Society went further, and by vote instructed the Permanent Secretary to communicate with the President of every County Medical Society in the State and urge concurrent action. If this distant State lend such enthusiastic and material aid to our undertaking, may it not be expected that all others will manifest similar interest, which ought to be proportionally greater as the birth-place and home of Rush and the site of the contemplated statue are approached?

Unless the several States and Territories can be represented in the Committee by men who will engage to thoroughly canvass each respectively, the work of collecting funds must chiefly devolve upon the officers and an executive subcommittee, who, through the columns of medical journals and the cooperation of medical associations, will endeavor to reach the greatest possible number of our professional *confrères*. It will obviate the necessity for intermediary correspondence if all subscriptions and donations are at once mailed to Dr. Toner, the Treasurer, as above suggested; and in this connection it may be proper to state, in reply to numerous inquiries, that the limitation of subscriptions to one dollar is not intended to prevent the donation of any other sum which those interested in the project may desire to make.

After previous recitals of the eminent services of this "greatest physician this country has ever produced,"—of this learned and distinguished man of letters and science; this indefatigable philanthropist, sanitarian and social reformer; this illustrious statesman, Revolutionary military officer and patriot, it is unnecessary to add another word in explanation why the effigy of Benjamin Rush should have a place in the National gallery beside those of the other founders of this Republic.

I have to regret that the exigencies of the naval service to which I belong have not permitted my attendance at Cincinnati, and though, at no distant day, I entertain the hope of a field of duty less remote, if the Association believe it will be for the better interests of this undertaking to place the chairmanship of this Committee in other hands, I beg to be permitted to resign my trust for this purpose, assuring my fellow-members of my undiminished interest in the realization of a project which I had the honor of first proposing to them, four years ago, at Washington. To the Medical Corps of the Army will ever remain the credit of having inaugurated and established the great National Medical Library and Museum which now graces the capital of this country. As an officer of the Medical Corps of the Navy, I shall always feel proud of having suggested and, in however feeble a way, contributed towards placing at the portal of that magnificent and unrivalled depository of medical literature, science and art, the enduring testimonial of one who so honored his profession that his name is inseparable from American medicine, and so honored his country that his exemplary life is part of that country's history. Respectfully submitted.

ALBERT L. GIHON, M.D.,
Chairman of Rush Monument Committee.

The Treasurer of the Rush Monument Committee begs leave to submit this his second annual report of the financial condition and prospects of the movement to collect sufficient funds to erect an appropriate monument to the memory of this great physician. As far as I can discover, the project is approved by all who have given a moment's thought to it, and no physician who loves his profession ever declines to give, when asked by a duly authorized agent. The Committee has upon it a member resident in each State and Territory, the Army, Navy and Marine Hospital Service, with a view to reach the whole profession, yet the Treasurer has only heard from the following States and Territories during the year:

Arkansas, California, Dakota, District of Columbia, Maryland, Pennsylvania, South Carolina, Tennessee, Wisconsin, U. S. Army and U. S. Navy.

The Chairman of the Committee, A. L. Gihon, Surgeon U. S. Navy, in his report gives a succinct account of the efforts of the Committee in the past, and its hopes in the future, to meet the reasonable expectations of the American Medical Association in this enterprise to which it has committed itself. I shall therefore confine my report strictly to the financial condition of the movement. There was remaining in the treasury at the time of my last report $392. The whole sum which has reached the Treasurer since his last report is $498, and the total outlay since last report $34.73. There are practically no bills outstanding and there is now in the bank-book of the Treasurer $709.19. The Pennsylvania State Medical Society has, I am informed, made a subscription

of $500 to be paid in annual installments, $100 of which has been paid and is credited in this report. It is also reported that the Michigan State Medical Society has voted $100; this has has not yet reached the Treasurer. Contributions by the medical men attending the State Medical Society of California during last month amounted to $105 and were made to Dr. G. G. Tyrrell, member of the Rush Monument Committee for that State. This amount was sent to me in two postal orders. For some cause not yet explained, the post-office in Washington has not been informed, up to the time of my leaving, to pay these orders. In my report I have treated this amount as actually in my hands or in bank, for I had confidently expected it to be paid each day. All I can now do is to exhibit the post-office orders which are pinned to the bank-book as my authority, which I do. The bank-book of the Rush Monument Committee is herewith submitted.

The rules adopted by the Committee for husbanding the funds collected for the monument have been strictly observed. They are, in brief, that all moneys received shall be deposited by the Treasurer in the bank of Riggs & Co., of Washington, to the credit of the Rush Monument Committee, that no debts shall be contracted by individual members of the Committee not authorized by a vote of the Committee except the necessary expenses of postage and printing, and these must have the concurrent sanction of the President, Secretary and Treasurer; and that no moneys shall be drawn from the treasury except upon vouchers bearing the endorsements of the President and Secretary of the Committee.

Appended to this report is an alphabetical list of all the contributions since last report, with their post-office address and the amount given by each:

A. K. Agara,[1] Oakland, Cal.; C. H. Allen, Centerville, Cal.; F. C. Amiss, St. Louis, Mo.; J. A. Anderson, San Francisco, Cal.; J. D. Arnold, San Francisco, Cal.; Wm. Ashmead, Philadelphia, Pa., $100.

C. G. Bailey, Santa Anna, Cal.; J. E. S. Baker, Angel's Camp, Cal.; A. Barhan, San Francisco, Cal.; D. N. Bartolette, U. S. N.; J. B. Baylor, Baltimore, Md.; H. M. Beck, Wis.; B. P. Bellamy, Livermore, Cal.; C. E. Blake, San Francisco, Cal.; J. M. Boyd, Knoxville, Tenn.; J. B. Bratton, Yorkville, S. C.; L. Bremer, St Louis, Mo.; J. M. Briceland, Shausta, Cal.; C. E. Briggs, St. Louis, Mo.; W. A. Briggs, Sacramento, Cal; W. E. Briggs, Sacramento, Cal.; H. J. Brodie, Cambria, Cal., C. B. Brown, San Francisco, Cal.; O. O. Burgess, San Francisco, Cal.

N. G. Cabell, U. S. N.; M. A. Cachot, San Francisco, Cal.; M. Campbell, Knoxville, Tenn.; C. G. Cargill, Lakeport, Cal.; L. Carpenter, Lakeport, Cal.; N. B. Carson, St. Louis, Mo.; R. Chatham, Nashville, Tenn.; M. M. Chipman, San Francisco, Cal., Geo. Chismore, San Francisco, Cal.; W. D. Clark, Cottonwood, Cal.; J. M. Coffman, Black Rock, Ark.; R. B. Cole, San Francisco, Cal.; C. M. Cooper, Cleveland, Tenn.; John Curwin, Warren, Pa., $10; Clinton Cushing, San Francisco, Cal.

H. C. Dalton, St. Louis, Mo.; G. W. Davis, San Francisco, Cal.; T. A. Davis, San Diego, Cal.; H. L. Day, Wis.; C. Deaderich, Knoxville, Tenn.; J. O'F. Delaney, St. Louis, Mo.; T. B. DeWitt, San Francisco, Cal.; Wm. Dickinson, St. Louis, Mo.; R. Douglass, Nashville, Tenn.; C. M. Drake, Knoxville, Tenn.; F. C. Durant, San Quinton, Cal.

C. N. Ellinwood, San Francisco, Cal.; T. P. Eagle, Folsom, Cal.; R. W. Earle, Wis.; J. S. Eastman, Berkly, Cal.; Jos. D. Eggleston, Worsham, Va.; Wm. G. Eggleston, Chicago, Ill.

[1] When not otherwise specified the amount is $1.

Henry Ferrier, San Francisco, Cal.; E. N. Foot, Lockford, Cal.; E. J. Fifield; Petaluma, Cal.; W. E. Fifield, San Francisco, Cal.; C. C. Fite, Knoxville, Tenn.; G. J. Fitzgibbon, San Francisco, Cal.; F. R. Fry, St. Louis, Mo.

A. M. Gardner, Calestoga, Cal.; Henry Gibbons, Jr., San Francisco Cal.; W. P. Gibbon, Alameda, Cal.; F. A. Glasgow, St. Louis, Mo.; G. W. Graves, Petaluma, Cal.; J. D. Griffith, Kansas City, Mo.; W. A. Grover, Berkly, Cal.

J. R. Hall, Marshall, Mo.; Geo. Halley, Kansas City, Mo.; H. N. T. Harris, U. S. N.; A. J. Hart, Modisto, Cal.; H. H. Hart, San Francisco, Cal., H. N. Hardister, Victor, Ark.; W. J. Hatcher, Imboden, Ark.; E. H. Higbee, St. Louis, Mo.; T. Happel, Trenton, Tenn.; H. O. Hirshfelder, San Francisco, Cal.; W. H. A. Hodgdon, San Francisco, Cal.; Geo. Homan, St. Louis, Mo.; K. I. Howard, San Francisco, Cal.; S. D. Howard, San Francisco, Cal.; T. W. Huntington, Sacramento, Cal.

E. H. Irwin, Wis.

J. W. Jackson, Kansas City, Mo.

F. B. Kane, San Francisco, Cal.; C. G. Kenyon, San Francisco, Cal.; W. W. Kerr, San Francisco, Cal.; A. R. Kinloch, Charleston, S. C., $5; S. B. P. Knox, Santa Barbara, Cal.

G. La Bruce, San Francisco; G. D. Ladd, Wis.; L. C. Lane, San Francisco; T. S. Latimer, Baltimore, Md.; W. M. Lawler, San Francisco; T. J. Le Tourneaux, San Francisco; G. P. Lee, Merced, Cal.; J. K. Lemen, St. Louis, Mo.; J. M. Leete, St. Louis, Mo.; B. B. Lenoir, Lenoir's, Tenn.; W. B. Lewitt, San Francisco; Walter Lindley, Los Angeles, Cal.; Henry Lippincott, U. S. A.; W. F. Lynch, Walnut Creek, Cal.; E. V. Lonigo, San Francisco; S. F. Long, San Francisco; F. J. Lutz, St. Louis, Mo.; Douglas Luce, Banta, Cal.

W. D. McCarthy, San Francisco; W. W. McFarlane, Agnew, Cal.; W. F. McNutt, San Francisco; W. H. Mays, Stockton, Cal.; L. Melton, Wheatland, Cal.; E. S. Merritt, San Francisco; G. W. Merritt, San Francisco; John Montgomery, San Francisco; M. W. Moody, San Francisco; G. F. G. Morgan, San Francisco; J. F. Morse, San Francisco; D. McL. Miller, Wis; J. H. Miller, Redding, Cal.; H. H. Mudd, St. Louis; Mo.; A. Munro, Wis.; J. C. Mulhall, St. Louis, Mo.

B. Norris, Surg. U. S. A.; J. F. Noyes, Detroit, Mich.

H. S. Orme, Los Angeles, Cal.

J. H. Parkinson, Sacramento, Cal.; F. H. Payne, Berkly, Cal.; Pennsylvania State Medical Society, $100; T. Phillips, Stockton, Cal.; R. H. Plummer, San Francisco; G. H. Powers, San Francisco; A. H. Pratt, Oakland, Cal.; G. J. Preston, Baltimore, Md.; T. F. Prewitt, St. Louis, Mo.; T. H. Pinkerton, Oakland, Cal.

G. P. Reynolds, Alameda, Cal.; J. G. Riely, Santa Anna, Cal.; J. Rosenstine, San Francisco; T. Ross, Woodland, Cal.; E. B. Robertson, Jackson, Cal.; H. D. Robertson, Yreka, Cal.; J. W. Robertson, Napa, Cal.; M. Rosenheimer, Wis.

E. R. C. Sargent, San Francisco; D. D. Saunders, Memphis, Tenn.; W. J. Scott, Cleveland, O.; A. Shirp, San Francisco; J. V. Shoemaker, Philadelphia, Pa.; J Simpson, San Francisco; Jos. Sampson, San Francisco; Jules Simon, San Francisco; J. C. Sundberg, San Francisco; J. H. Soper, San Francisco; South Carolina Med. Association, $50; J. H. Stallara, San Francisco; J. Steer, St. Louis, Mo.

C. A. Thompson, Jefferson City, Mo.; W. S. Thome, San Jose, Cal.; C. A. Todd, St. Louis, Mo.; J. R. Todd, Gridley, Cal.; M. C. Toole, San Francisco; H. Tuholske, St. Louis, Mo.; G. G. Tyrrell, Sacramento, Cal.

C. C. Valle, San Diego, Cal.; G. A. Vogt, Biehle, Mo.; Wm. Varian, Titusville, Pa.

L. M. Wanzer, San Francisco; Warren Co. Med. Society, Pa., $10; C. V. Westlake, Red Bluff, Cal.; W. J. Watkins, Walnut Ridge, Ark.; J. P. Widnay, Los Angeles, Cal.; A. P. Whittle, San Francisco; DeF. Willard, Philadelphia, Pa., $5; Wisconsin State Med. Society, $50.

All of which is respectfully submitted. J. M. TONER,
Treasurer Rush Monument Committee.

On motion, these reports were received, and the usual auditors were requested to examine the report of the Treasurer.

The Permanent Secretary then read the report of Dr. R. J. Dunglison, Treasurer of the Association.

REPORT OF THE TREASURER.

I have the honor to report, as Treasurer of the Association, that the receipts from all sources since the last annual report, presented at Chicago in June, 1887, have amounted to $25,649.90; the expenditures, as per itemized account accompanying this report, to $23,242.07; leaving a balance in the treasury at this date of $2,407.83. Copies of the *Transactions* of the Association have been sold during the past year from the office of publication amounting in all to $125.00.

All of which is respectfully submitted.

RICHARD J. DUNGLISON, *Treasurer.*

Dr. Richard J. Dunglison, Treasurer, in account with the American Medical Association.

1887.	DR.
June 7, to cash balance, as per report at Chicago meeting....	$1,403.77
June 11, to amount received from delegates and members at Chicago.....	5 205.00
1888.	
May 5, to amount of dues from members to date.....	7,643.15
May 5, to amount received from office of publication to date..	11,397.98
	$25,649.90

CR.	
1887.	
June 15, by cash paid Dr. Wm. B. Atkinson, Perm't Sec'y, expressage, telegrams, postage and traveling expenses to date.....	$ 148.65
June 17, by cash paid Wm. F. Fell & Co., printing postal cards, and stamped envelopes.....	48.60
June 18, by cash paid Dr. Richard J. Dunglison, Treasurer, expenses of travel, postage, telegrams, etc.....	104.75
July 14, by cash paid Dr. C. G. Smith, Chairman Com. of Arrangements, Chicago, rental of halls, printing, etc.....	704.86
Aug. 15, by cash paid Wm. F. Fell & Co., printing slips, cards, stamped envelopes.....	40.13
Aug. 18, by cash paid Dr. E. S. F. Arnold, Treasurer International Med. Congress, by resolution of Association..	1000.00
Aug. 30, by cash paid Wm. F. Fell & Co., stamped envelopes and postals.....	12.50
Aug. 31, by cash paid for postage, expressage and collection charges to date.....	39.45
Sept. 21, by cash paid for stationary, postage, etc.....	9.13
Sept. 24, by cash paid Wm. F. Fell & Co., printing slips, stamped envelopes, etc.....	44.30
Nov. 10, by cash paid Wm. F. Fell & Co., printing note heads and slips; stamped envelopes.....	27.01
Nov. 12, by cash for postage, collection charges, P. O. box, circulars, etc.....	36.14
Nov. 28, by cash paid Dr. C. H. A. Kleinschmidt, Librarian, freight on books.....	1.95
Dec. 13, by cash for collection charges, postage, addressing circulars, etc.....	12.95
Dec. 13, by cash paid Wm. F. Fell & Co., printing slips, stamped envelopes, etc.....	25.55
Dec. 22, by cash paid Wm. F. Fell & Co., postal cards and stamped envelopes.....	15.90
1888.	
Feb. 27, by cash paid for collection charges on $1,405 (drafts deposited for collection).....	28.10
March 17, by cash for stationery, postals, rental of P. O. box, collection charges, etc.....	56.17
May 7, paid publication expenses of the Journal of the Association to date.....	14,885.93
March 7, by cash paid Dr. N. S. Davis, editorial work to date.....	6,000.00
May 7, by balance.....	2,407.83
	$25,649.90

CINCINNATI, MAY 10, 1888.

This certifies that we have examined the accounts and vouchers of the treasurer to this date, and find the same correctly cast and properly vouched.

(Signed) ALONZO GARCELON,
L. S. MCMURTRY,
W. T. BRIGGS.

On motion it was received and placed on file.

The Permanent Secretary then read the

REPORT OF THE LIBRARIAN,

Dr. C. H. A. Kleinschmidt as follows:

I have the honor to present the accompanying catalogue of additions to the Library of the Association since my last published report. It will be seen that the catalogue covers the period from May 1, 1886, to May 1, 1888, for the reason that my last report made to the Association in 1887, was somehow lost after having been presented.

In the period specified 369 distinct titles have been added to the Library, exclusive of Transactions of Societies Reports of Boards of Health, and Medical Journals not previously received and catalogued as such. The Library therefore at present contains about 7500 volumes, representing 2850 titles.

In conclusion, I would respectfully suggest that the subscription to the *Index Medicus* for the current year be continued, and that the sum of $10 be appropriated to that end.

Respectfully submitted,

C. H. KLEINSCHMIDT,
Librarian.

On motion it was received, and the amount, ($10) requested was granted.

The special order being the consideration of the amendment laid over from yesterday, on motion of Dr. N. S. Davis it was laid on the table until the next annual meeting, on account of delay in receiving printed copies as ordered yesterday.

Several motions having been offered on the same, the President decided them out of order as the subject had been disposed of.

The following amendment was offered by Dr. N. S. Davis, which lies on the table until the next annual meeting: "Strike out the last clause or paragraph of Section VII, relating to individually affixing names to the constitution and regulations of this Association."

Dr. H. N. Moyer, of Ill., offered the following amendments which lie on the table until the next annual meeting:

There shall be created a Section of Pharmacy and Materia Medica which shall have its own autonomy in like manner as the Section in Dental and Oral Surgery. Reputable members of State Pharmaceutical Associations shall be eligible as members of the same on presentation of credentials from their State Secretary, but shall have no voice in the general sessions of the Association. The Section of Surgery shall hereafter be denominated the Section of Surgery and Gynæcology. There shall be created a Section of Anatomy and Physiology. The Section of Obstetrics and Diseases of Women shall be abolished. The Section of Diseases of Children shall hereafter be denominated the Section of Obstetrics and Pædriatrics. The Section of Dermatology and Syphilography shall hereafter be denominated the Section of Dermatology and Genito-Urinary Diseases. The Section of Medical Jurisprudence shall hereafter be denominated the Section of Mental and Nervous Diseases. The Section of State Medicine shall hereafter be denominated the Section of State Medicine and Medical Jurisprudence. The Section of Practice of Medicine, Materia Medica and Physiology shall hereafter be denominated the Section of Internal Medicine.

On motion of Dr. J. M. Keller, of Arkansas it was *Resolved*, That in future, each Delegate or perma-

nent member, shall, when he registers, also record the name of the Section, if any, that he will attend, and in which he will cast his vote for Section Officers.

He stated that he had offered this because it was found that members voted in several Sections, thus aiding in the election of officers of more than one Section.

Dr. W. H. Daly, Pa., moved to rescind the action had yesterday, permitting the Sections to meet at 11 A.M.

After some discussion, it was adopted.

Dr. W. Brodie, Mich., offered a motion that in future the Committee of Arrangements do not provide for an exhibition.

On motion of Dr. I. N. Love, Mo., the subject was laid on the table.

Dr. Toner, of the Committee on Necrology, announced that his report had been published in THE JOURNAL from time to time.

Dr. A. Garcelon, Me., announced for the auditors that they had examined the accounts of Dr. Toner, Treasurer of the Rush Monument Fund, and found them correct.

A communication was presented by Dr. I. N. Quimby, N. J., from the Woman's Christian Temperance Union.

On motion, it was laid on the table.

On motion, the Association adjourned to meet at 10 A.M., on Friday.

FRIDAY, MAY 11—FOURTH DAY.

THE PRESIDENT called the Association to order at 10 A.M.

The *Address in State Medicine* was read by DR. H. P. WALCOTT, Mass.

On motion of Dr. Toner, it was referred for publication, and thanks rendered to the author. (See THE JOURNAL, May 26.)

Dr. N. S. Davis read a brief abstract of the report of the *Standing Committee on Meteorological Conditions.*

On motion, the report was referred for publication.

Dr. I. N. Quimby, N. J., read the report of *Committee on Fœticide.*

After some discussion, on motion of Dr. W. Bishop, Pa., the whole subject was laid upon the table.

Dr. H. O. Marcy, Mass., read the report of the *Committee on duties commonly exercised by Coroners.*

On motion of Dr. S. T. Armstrong, U. S. Marine Hospital Service, the report was received and the Committee continued.

The Permanent Secretary read the names of the newly-elected

OFFICERS OF SECTIONS.

Practice of Medicine, etc.—F. C. Shattuck, Boston, Mass., Chairman; G. A. Fackler, Cincinnati, Ohio, Secretary.

Surgery and Anatomy.—N. P. Dandridge, Cincinnati, Ohio, Chairman; W. O. Roberts, Louisville, Ky., Secretary.

Obstetrics and Diseases of Women.—W. H. Wathen, Louisville, Ky., Chairman; A. B. Carpenter, Cleveland, Ohio, Secretary.

State Medicine.—J. Berrien Lindsley, Nashville, Tenn., Chairman; S. T. Armstrong, U. S. Marine Hospital, N. Y., Secretary.

Ophthalmology, Otology and Laryngology.—Geo. E. Frothingham, Ann Arbor, Mich., Chairman; G. C. Savage, Nashville, Tenn., Secretary.

Laryngology and Otology.—W. H. Daly, Pittsburg, Pa., Chairman; E. Fletcher Ingalls, Chicago, Ill., Secretary.

Diseases of Children.—J. A. Larrabee, Louisville, Ky., Chairman; C. J. Jennings, Detroit, Mich., Secretary.

Medical Jurisprudence.—W. Kiernan, Chicago, Ill., Chairman; T. C. Evans, Baltimore, Md., Secretary.

Dermatology and Syphilography.—L. Duncan Bulkley, N. Y., Chairman; W. T. Corlett, Cleveland, Ohio, Secretary.

Oral and Dental Surgery.—F. H. Rehwinkel, Chillicothe, Ohio, Chairman; E. S. Talbot, Chicago, Ill., Secretary.

The Permanent Secretary then read the following from the Section on State Medicine:

To the Secretary of the American Medical Association, Sir:—I have the honor to report that the Section on State Medicine respectfully recommends the passage of the following resolution by this Association.

Resolved, That the American Medical Association urges upon the House of Representatives of the Congress of the United States, the necessity and importance of the immediate passage of Senate Bill No. 2493—"*To Perfect the Quarantine Service of the United States*"—which bill has passed the Senate and is now pending in the House of Representatives, in order to make provision for protection against the introduction of contagious diseases before the approaching summer. Very respectfully,

S. T. ARMSTRONG, *Sec'y of Section on State Medicine.*
Cincinnati, May 11, 1888.

On motion, this resolution was adopted as the sense of the Association.

Dr. J. M. Keller, of Ark., read the following notice for amending the By-laws, viz: "To change the By-law whereby the officers of Sections are elected by the Sections."

This will lie over till next meeting.

Dr. W. Porter, Mo., and others called up the amendment to the Constitution offered by Dr. C. Seiler, Pa., in 1884, and now asked for by the Section on Ophthalmology.

The action was agreed to, and a new *Section on Laryngology and Otology* was created.

The Permanent Secretary read the list of members appointed as delegates abroad, as follows:

R. H. Plummer, San Francisco, Cal.; N. S. Davis, Chicago, Ill.; J. J. Chisolm, Baltimore, Md.; L. A. Sayre, N. Y.; J. B. Hamilton, D. C.; C. C. Vaughan, Mich.; J. E. Owens, Chicago, Ill.; S. J. Jones, Chicago, Ill.; H. A. Kelly, Philadelphia, Pa.; A. E. Hoadley, Chicago, Ill.; W. H. Myers, Ft. Wayne, Ind.; F. E. Waxham, Chicago, Ill.; J. V. Shoemaker, Philadelphia, Pa.; D. A. K. Steele, Chicago, Ill.; Alex. McAlister, Camden, N. J.; Ephraim Cutter, New York.

After much discussion, on motion of Dr. N. S. Davis, the report by Dr. Quimby, on *Fœticide*, was taken from the table and referred to the Section on State Medicine.

In accordance with certain suggestions in the President's Address, Dr. Quimby brought up the subject of legislation for State Boards of Examiners.

Dr. Armstrong stated that such a committee already existed.

Dr. Toner moved to refer this matter to that committee.

On motion of Dr. J. H. Murphy, of Minn., the whole subject was laid on the table.

On motion of Dr. S. F. Forbes, Ohio, it was

Resolved, That the American Medical Association approve of the movement looking to the celebration in Washington, in 1892, of the 400th Anniversary of the discovery of this Continent by Columbus, and the establishment there of a Museum of the Arts, Industries, and Antiquities of the Free Americans, and hereby request Congress to pass the necessary legislation by appropriations to this end.

On motion of Dr. F. Woodbury, Pa., the following was unanimously adopted:

WHEREAS, The delegates and members of the American Medical Association at the conclusion of its 39th annual meeting have been very hospitably received and entertained by the local profession and citizens of Cincinnati; and

WHEREAS, Owing to the well-directed efforts of the Committee on Entertainment and their able colleagues, this has proved to be one of the most harmonious and enjoyable meetings ever held in the history of this Association; therefore

RESOLVED: That the heart-felt acknowledgement of this meeting be tendered to the physicians of this city; to the *Apollo Club*, and to all who have contributed towards the great success of this session; and especially are our thanks due, and we take pleasure in this manner to express them, to the rare coterie of ladies, who have given brilliancy to the social entertainments by their charming presence. They are the best jewels in the crown of this metropolis, which is destined to be the "Queen City" of the East as well as "the West."

On motion of Dr. Toner, the thanks of the Association were given Dr. Garnett, for the able manner in which he had presided. Dr. Garnett acknowledged this in a brief and appropriate address.

On motion of Dr. W. H. Daly, Pa., the Association then adjourned to meet in Newport on the 1st Tuesday of June, 1889.

WM. B. ATKINSON,
Permanent Secretary.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 19, 1888, TO MAY 25, 1888.

Col. Chas. Sutherland, Medical Director, to inspect the medical department at St. Francis Bks., Fla., Ft. Barrancas, Fla., Mt. Vernon Bks., Ala., and Jackson Bks., La. S. O. 100, Div. Atlantic, May 19, 1888.

Major F. L. Town, Surgeon, U. S. Army, Post Surgeon at the Post of San Antonio, Tex., will take charge of the office of the Medical Director at those headquarters, and perform the duties of that officer during his absence on leave. S. O. 51, Dept. Texas, May 11, 1888.

Major Harvey E. Brown, Surgeon, directed to continue on duty at Ft. Barrancas, Fla., until further orders. S. O. 115, A. G. O., May 18, 1888.

Major J. P. Kimball, Surgeon, leave of absence extended two months. S. O. 117, A. G. O., May 21, 1888.

Capt. Geo. McCreery, Asst. Surgeon, to accompany Seventh Cavalry from Ft. Meade, D. T., to Ft. Riley, Kan. From Ft. Riley he will return to Ft. Meade. S. O. 42, Dept. Dak., May 17, 1888.

Capt. M. C. Wyeth, Asst. Surgeon, will be relieved from duty at Ft. Barrancas, Fla., at the expiration of his present leave of absence, and will report in person to the commanding officer Ft. Huachuca, Ariz., for duty at that post. S. O. 115, A. G. O., May 18, 1888.

First Lieut. Wm. L. Kneedler, Asst. Surgeon, will accompany from Ft. Snelling, Minn., that portion of the Twenty-fifth Infantry detailed for Ft. Shaw, M. T. From Cascade, M. T., he will accompany that portion of the Third Infantry *en route* from Ft. Shaw, M. T., to Ft. Snelling, Minn. S. O. 40, Dept. Dak., May 14, 1888.

First Lieut. R. L. Robertson, Asst Surgeon, will accompany from Ft. Keogh, M. T., the Fifth Infantry to the Dept. of Texas, returning to his station on the completion of the duty. S. O. 43, Dept. Dak., May 18, 1888.

First Lieut. C. B. Ewing, Asst. Surgeon, will accompany the Twenty-second Infantry, as medical officer, to the Dept. of Dak., returning to his station on the completion of the duty. S. O. 56, Dept. Wis., May 17, 1888.

Par. 12, S. O. 49, Dept. Tex., May 5, relative to First Lieut. H. S. T. Harris, Asst. Surgeon, accompanying Eighth Cavalry to Dept. of Dak., is amended by par. 1, S. O. 50, Dept. Tex., May 9, 1888, Par. 1, S. O. 50, Dept. Tex., May 9, is revoked by par. 1, S. O. 51, Dept. Tex., May 11, 1888.

First Lieut. H. S. T. Harris, Asst. Surgeon, will be relieved from duty at Camp Pena, Col., and proceed to San Antonio, where he will report to commanding officer battalion Sixteenth Infantry for duty as medical officer with that battalion to its destination in Dept. Platte. Upon completion of this duty, he will return to his proper station, Camp Pena, Colorado, Tex. S. O. 51, Dept. Tex., May 11, 1888.

First Lieut. Leonard Wood, Asst. Surgeon, leave of absence extended two months. S. O. 114, A. G. O., May 17, 1888.

First Lieut. W. B. Banister, Asst. Surgeon, granted leave of absence for two months, with permission to apply for an extension of twenty-seven days. S. O. 119, A. G. O., May 23, 1888.

Par. 15, S. O. 49, Dept. Tex., c. s. (relative to First Lieut. Paul Clendenin, Asst. Surgeon, accompanying Sixteenth Infantry to its destination), is revoked by S. O. 51, Dept. Tex., May 11, 1888.

First Lieut. Paul Clendenin, Asst. Surgeon, will proceed from Ft. McIntosh to Ft. Davis and report to commanding officer Eighth Cavalry, for duty as medical officer with that regiment on its march to Ft. Concho, from which place Lieut. Clendenin will return to his proper station. S. O. 51, Dept. Tex., May 11, 1888.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING MAY 26, 1888.

P. A. Surgeon S. H. Dickson, detached from the receiving ship "Dale," and to Marine Bks., Washington, D. C.

P. A. Surgeon F. S. Nash, ordered to the receiving ship "Dale" in addition to present duties.

Surgeon Melancthon L. Ruth, granted one year's leave of absence from date.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDING MAY 26, 1888.

Surgeon Walter Wyman, leave of absence extended fourteen days. May 22, 1888.

Asst. Surgeon G. M. Magruder, relieved from duty at Marine Hospital, Chicago, detailed as medical officer revdnue bark "Chase," during summer season. May 19, 1888.